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Unsung Heroes of a Tragic Generation

Risk factors and frequency of postprocedural hemodynamic instability after carotid artery stent placement

Recreational diving for women and children

Initial diagnosis of blood disorders

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10. If the manuscript is not accepted for publication, the Editorial Board will return the submitted article to the Author.

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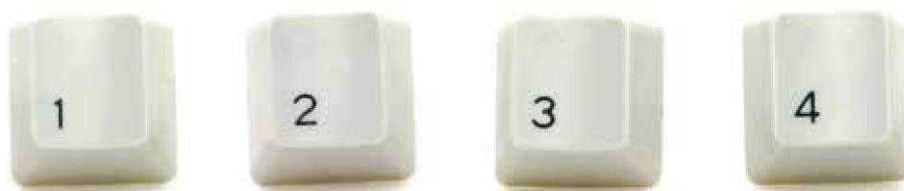
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Letter from the Editor-in-Chief



Ladies and Gentlemen, Colleagues

We present you with the 4th issue of Military Physician in 2021. You can find articles devoted to the widely understood phenomenon of trauma, or the problems associated with diving for women and children, and a very useful clinical practice article on the diagnostics of blood diseases by Prof. Wiesław Jędrzejczak.

There is also an original paper on haemodynamic instability after carotid artery stent implantation.

As usual, the issue contains a series of papers devoted to the history of the Military Health Service.

This issue closes Volume 99 and the publication cycle to date.

On 01/10/2021 a programme was launched to enable the submission of papers – a link to the editor can be found on the website of Lekarz Wojskowy, we also provide it here: www.editorialsystem.com/lwo/

Wishing you pleasant reading, I encourage you to submit your papers for the next issue of the jubilee – 100th volume of the Military Physician.

I wish you good luck in 2022.

A handwritten signature in blue ink, which appears to read 'B. Kalicki'.

Prof. Assoc. Prof. Bolesław Kalicki

doi:

Risk factors and frequency of postprocedural hemodynamic instability after carotid artery stent placement

Czynniki ryzyka i częstość występowania niestabilności hemodynamicznej po zabiegach implantacji stentu do tętnicy szyjnej

Jarosław Świstak,¹ Aleksander Dębiec,¹ Wojciech Szypowski,¹ Piotr Piasecki,² Krzysztof Brzozowski,² Jacek Staszewski,¹ Adam Stępień¹

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Abstract. The frequency, risk factors and long term consequences of reflexive postprocedural hypotension (PH) following carotid artery stenting (CAS) are not well known. Prospective analysis of 30 patients with 6-month follow-up undergoing CAS with an emboli-protection device was performed. A validated 24-hour ABPM was taken 24 hours before and after CAS. PH was defined as systolic blood pressure (SBP) <90mm Hg, or decrease in mean arterial BP (MAP) of >20% or systolic BP (SBP) of ≥ 30 mm Hg of baseline BP reading. Neurological assessments were performed 24 hours after CAS and at 6-month follow-up visit. Median age was 69 years, 70% were male, 86% of patients had symptomatic carotid stenosis. Twenty patients (67%) experienced PH, 43% had transient bradycardia, 30% had both PH and bradycardia. The cumulated postprocedural mean SBP and DBP decreased from baseline 128/67 mm Hg to 108/54 mm Hg ($p < 0.01$), mean day (69/min) and night HR (58/min) decreased to respectively 58/min and 49/min ($p < 0.01$). We found no association of PH with age, ischemic heart disease, bifurcation involvement, balloon size, inflation pressure or longer lesion length. Patients with PH were significantly ($p < 0.05$) less often treated with Ca-antagonist (25% vs 70%), more often had ipsilateral ulcerated plaque (85% vs 50%) and had hemodynamically significant stenosis of contralateral ICA (60% vs 30%). During 6-month follow-up only 1 case of neurological deterioration was noticed. PH was a common phenomenon after CAS, however it did not result in neurological complications. Patients at risk can be possibly identified through clinical and angiographic variables.

Key words: carotid artery stenting, hemodynamic instability, postprocedural hypotension, stroke

Streszczenie. Częstość występowania, czynniki ryzyka i odległe konsekwencje odruchowego niedociśnienia tętniczego (NDT) po zabiegu stentowania tętnic szyjnych (CAS) nie są dokładnie określone. Przeprowadzono prospektywną analizę z 6-miesięczną obserwacją 30 kolejnych chorych leczonych CAS w prewencji udaru mózgu. U wszystkich wykonano około zabiegowe 24-godzinne holterowskie monitorowanie ciśnienia tętniczego: NDT zdefiniowano jako około zabiegowy spadek ciśnienia skurczowego (SBP) <90 mm Hg lub średniego dobowego ciśnienia (MAP) o >20%, lub SBP o ≥ 30 mm Hg względem wartości sprzed zabiegu. Ocena neurologiczna była przeprowadzona 24 godziny po CAS oraz 6 miesięcy po zabiegu. Mediana wieku wyniosła 69 lat, 70% grupy badanej stanowili mężczyźni, u 86% rozpoznano objawowe zwężenie tętnicy szyjnej. U 20 pacjentów (67%) ustalono rozpoznanie NDT, u 43% stwierdzono przejściową bradykardię, a u 30% NDT i bradykardię. Skumulowane średnie pozabiegowe SBP i ciśnienie rozkurczowe (DBP) obniżyły się z wyjściowo 128/67 mm Hg do 108/54 mm Hg ($p < 0,01$), średnia częstotliwość rytmu serca w ciągu dnia (69/min) i nocy (58/min) spadły do odpowiednio 58/min i 49/min ($p < 0,01$). Nie stwierdzono związku pomiędzy NDT a wiekiem, chorobą niedokrwinną serca, zajęciem rozwidlenia tętnicy szyjnej, przebiegiem zabiegu -wielkością balonu, ciśnieniem jego napęnlania oraz długością blaszki miażdżycowej. Pacjenci z NDT istotnie rzadziej ($p < 0,05$) byli leczeni blokerami kanału wapniowego (25% vs 70%), częściej mieli stwierdzoną tożsronną do stentu owrzdziatą blaszkę miażdżycową (85% i/s 50%) i przeciwstronnie istotne hemodynamicznie zwężenie tętnicy szyjnej wewnętrznej (60% vs 30%). W trakcie 6-miesięcznej obserwacji tylko u jednego pacjenta wystąpiło pogorszenie stanu neurologicznego. Wyniki badania wskazują, że NDT jest częstym zjawiskiem po CAS, ale nie wiąże się z istotnym ryzykiem powikłań neurologicznych. Charakterystyka kliniczna pacjenta i parametry angiograficzne mogą ułatwić ocenę ryzyka wystąpienia NDT.

Słowa kluczowe: stertowanie tętnic szyjnych, udar mózgu, niestabilność hemodynamiczna, hipotonia pozabiegowa

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Introduction

Carotid endarterectomy (CEA) and carotid artery stenting (CAS) are effective long-term stroke prevention strategies in both symptomatic and asymptomatic patients. The most serious acute complication associated with CAS is stroke, which can occur due to thromboembolism, hyperperfusion syndrome, hemorrhage or hypoperfusion. Acute and/or prolonged hemodynamic instability (HI) involving hypotension or bradycardia during CEA or CAS is a well-recognized phenomenon which occurs in 29% - 51% of patients [1]. The clinical significance of this phenomenon is not known. A clinical syndrome of intraprocedural and postprocedural hypotension (PH) has been described in association with carotid endarterectomy and surgical manipulation or compression of the carotid bulb. Activation of highly stretch-sensitive baroreceptors during carotid stent placement and balloon angioplasty may activate an autonomic system resulting in cardiodepression and vasodilatation. This may lead to intraprocedural syncope and/or cerebral hypoperfusion in some patients [2]. Current studies revealed that up to 30% of patients require transient vasopressors due to postoperative hypotension following CAS [3]. Profound hypotension may lead to neurological complications after CAS, especially to watershed infarcts in patients with severe stenosis of the contralateral carotid artery [4]. This has also been associated with an increased incidence of other major vascular (e.g. cardiac) adverse events in the periprocedural period. However, the frequency, risk factors and long-term consequences of fluctuations in blood pressure (BP) have not been clearly defined. Until now, no recommendations have been published concerning the preprocedural medical management including the need to withdraw antihypertensive drugs prior to angioplasty or maintenance of prolonged hypotension following the procedure. The majority of published studies concentrate on short-term observation of PH complications, used manual BP measurements, and did not assess 24 h BP variability following CAS [5-7]. Therefore, the objective of this study is to evaluate the frequency and factors associated with PH defined and diagnosed by the use of 24 h BP Holter monitoring, and to assess the risk of neurological deterioration in longer observation.

Methods

Prospective analysis of 30 consecutive patients with 6-month follow-up undergoing elective CAS (self-expanding stent with an emboli-protection device) due to symptomatic or asymptomatic internal carotid artery (ICA) stenosis. All patients were ineligible for CEA [8]. The major inclusion criteria included asymptomatic patients with >60% stenosis (according to ACAS study) and symptomatic patients with at least 50% stenosis [9].

24-hour Ambulatory Blood Pressure Monitoring (ABPM)

A validated ABPM was performed 24 hours before and immediately after CAS using a portable non-invasive oscillometric and auscultatory device (Schiller MT-300). Measurements over a 24-hour period were recorded every 15 minutes during daytime hours (07.00 to 23.00) and every 30 minutes during night-time hours (23.00 to 7.00). For recordings to be considered valid, a minimum of 15 daytime and 8 night-time measurements were required. The type of device and the time of application (± 3 hours) was the same in all patients. The patients were instructed to follow their usual day-to-day activities. Mean 24-hour arterial blood pressure (MAP), daytime and night-time average systolic BP (SBP), and diastolic BP (DBP) were calculated and recorded automatically. Bradycardia and PH were defined as a heart rate and an SBP less than 60 beats/min and 90 mm Hg, respectively, or decrease in MAP of >20% of baseline BP reading or decrease in SBP of >30 mm Hg of baseline that lasted at least 1 hour during or after the procedure as defined according to the CAVATAS Study [10]. Patients were categorized by the presence (group PH) or the absence (group APH) of PH. Antihypertensive medication was maintained before and after CAS, and dosage was adjusted according to BP measurements. In the case of hypotonia, patients routinely receive intravenous 1000 ml of 0.9% natrium chloratum and had reduction of hypotensive drugs and diuretics.

Endovascular procedure

Written consent was obtained from each patient before the endovascular procedure. All patients received dual antiplatelet therapy for at least 5-7 days, intravenous

heparin bolus 5000 U at the beginning of the procedure and premedication with Atropine 0.5 mg shortly before balloon angioplasty and carotid stent placement. The procedure was done under local anesthesia using the standard technique described previously [11,12]. Beside ABPM measurements, patient BP, electrocardiogram and neurological status were continuously monitored during the procedure. Direct bilateral common carotid artery angiography was performed in order to confirm internal carotid artery stenosis. Placement of self-expanding Precise stent (Cordis, USA) was conducted after balloon angioplasty (Viatrac, Abbot, USA). Angioguard (Cordis, USA) - a distal embolic protection device - was used in each patient. Post dilatation was performed if needed after stent placement using a 5 mm or 6 mm balloon. Cerebral and common carotid arteriography was performed at the end of the procedure to confirm proper stent patency and lack of vascular complications (i.e. periprocedural cerebral artery embolism). Technical success of the procedure was defined as carotid stent placement with no residual stenosis.

Atherothrombotic risk evaluation

Based on medical records, physical examination and comprehensive history available at baseline, we evaluated atherothrombotic risk factors, including tobacco use, diabetes, hyperlipidemia, hypertension, coronary artery disease (CAD), and peripheral artery disease (PAD). Hypertension was defined as systolic BP (SBP) >140 mm Hg and/or diastolic BP >90 mm Hg, or use of antihypertensive medication. Diabetes mellitus was defined as fasting serum glucose level >126 mg/dL, hemoglobin A1c levels >6.5% or use of antidiabetic medication. Patients who were smokers at the time of analysis were classified as current smokers. All patients received optimal medical treatment according to guidelines.

Study endpoints

The primary study endpoint was PH, secondary endpoints included in-hospital mortality, any postoperative neurologic events (stroke/TIA), MACEs (myocardial infarction, congestive heart failure and dysrhythmias) and progression of neurological deficit during a 6-month follow-up. Neurological assessment in NIHSS score (NIHSS) and modified Rankin Score (mRS) were performed at baseline and 24 hours after CAS. Functional status in mRS and occurrence of secondary end-points were assessed during telephone assessment performed 6 months after CAS. As a routine management in our centre, all patients have control carotid ultrasound performed before discharge and in the case of neurological deterioration, a control brain CT scan to rule out acute infarction or hemorrhage. The study was conducted in accordance with the Declaration of Helsinki.

Statistical analysis

Statistical analysis was performed with the use of Student's t-test for continuous data, and the Chi-square test with Fisher exact test for categorical data. The difference between baseline risk factors and characteristics of carotid artery stenosis, procedures and preoperative and intraoperative hemodynamics were compared between patients with and without PH. A probability value of $p < 0.05$ was considered significant. All data are presented as mean \pm SD values. All analysis were performed using Statistica 10.0 software (StatSoft Inc., USA).

Results

Thirty consecutive patients undergoing CAS between 2013-2017 were recruited and all had complete follow-up. Median age was 69 years (range 62-78), 70% were males, 86% of patients had symptomatic internal carotid artery stenosis, all subjects were functionally independent at baseline, suffered from hypertension, and almost half were smokers (Table 1). No patients had concomitant atrial fibrillation, PAD, or previous CAS or CEA. In all 30 patients technical success was achieved at the end of the carotid stenting procedure. There were no serious periprocedural adverse events. Sixty seven percent of patients ($n = 20$) experienced PH, 43% had transient bradycardia ($n = 13$), 33% had both PH and bradycardia ($n = 10$). There were no differences in demographic data and vascular risk factors between those subjects who experienced hypotension versus those without PH (Table 1). However, patients with PH significantly less often were treated with Ca-antagonist, more often had ipsilateral to CAS ulcerated plaque or had hemodynamically significant stenosis of contralateral ICA. The frequency of bifurcation involvement was similar among groups as was maximal balloon pressure, stent diameter and length. The mean degree of stenosis of the ipsilateral carotid artery was not different between PH and groups (70% vs 65%, $p = 0.9$). Intraprocedural hypotension was more common in patients with PH (90% vs 40%, $p = 0.02$). The cumulated postprocedural mean SBP and DBP decreased from baseline 128/67 mm Hg to 108/54 mm Hg ($p < 0.01$), mean day (69/min) and night HR (58/min) at baseline decreased to respectively 58/min and 49/min ($p < 0.01$) (Figure 1). Of 13 subjects who experienced bradycardia 11 (85%) had bradycardia during the day compared to none before CAS ($p = 0.002$) and all experienced bradycardia at night compared to 7 (54%) before the procedure ($p = 0.01$). Only 3 subjects (23%) had symptomatic bradycardia (2 patients had vertigo, 1 experienced syncope) and required transient atropine infusion, any patient had required pacemaker implementation.

Tabel 1. Clinical characteristics of studied groups
Tabela 1. Charakterystyka kliniczna badanej grupy

clinical characteristics	all n	%	group PH	%	group APH	%	p value
no. of patients	30		20	67.0	10	33	
age (mean \pm SD) yr	69 \pm 11		67 \pm 10		70 \pm 8		NS
IHD	15	50.0	9	45.0	6	60	NS
male sex	21	70.0	16	80.0	5	50	NS
history of stroke	12	40.0	7	35.0	5	50	NS
history of TIA	9	30.0	5	25.0	4	40	NS
diabetes	7	23.3	4	20.0	3	30	NS
hyperlipidemia	21	70.0	13	65.0	8	80	NS
smoking	13	43.3	8	40.0	5	50	NS
hypertension	30	100.0	20	100.0	10	100	NS
statins	15	50.0	10	50.0	5	50	NS
antihypertensive treatment	27	90.0	20	100.0	7	70	NS
β -blockers	12	40.0	8	40.0	4	40	NS
ACE-inhibitors	21	70.0	14	70.0	7	70	NS
diuretics	10	33.3	6	30.0	4	40	NS
Ca antagonists	12	40.0	5	25.0	7	70	0.02
baseline mRS*	2 \pm 1		3 \pm 1		2 \pm 1		NS
baseline NIHSS*	4 \pm 2		4 \pm 1		4 \pm 2		NS
symptomatic ICA stenosis	26	86.7	18	90.0	8	80	NS
ulcerated plaque	22	73.3	17	85.0	5	50	0.04
bifurcation involvement	13	43.3	9	45.0	4	40	NS
contralateral stenosis >50%	15	50.0	12	60.0	3	30	0.04
maximal balloon pressure (atm)	13 \pm 1		13 \pm 1		13 \pm 1		NS
stent diameter (mm)	7 \pm 1		7 \pm 1		7 \pm 1		NS
stent length (mm)	30 \pm 10		30 \pm 10		30 \pm 10		NS
intraprocedural bradycardia	14	46.7	10	50.0	4	40	NS
intraprocedural hypotension	22	73.3	18	90.0	4	40	0.02

* in symptomatic patients

APH - absent PH, IHD - ischemic heart disease, PH - periprocedural hypotension

Majority of subjects with HI had asymptomatic PH (n = 13, 65%) or experienced mild symptoms (weakness, lightheadedness or pale skin, n = 4, 20%), 3 subjects (15%) had orthostatic hypotension which resulted in syncope with a spontaneous rapid and complete recovery. Any patient experienced other neurological deterioration during PH or later on during follow-up. The neurological condition in PH and APH groups at discharge from the hospital, and after 6-months, was not different from the baseline status in both NIHSS score and mRS.

Any patient experienced vascular events or death during hospitalization. Only 1 studied patient from PH group (5%) had secondary endpoint (TIA at 4 months following CAS), which was probably related to antiplatelet and statin therapy noncompliance.

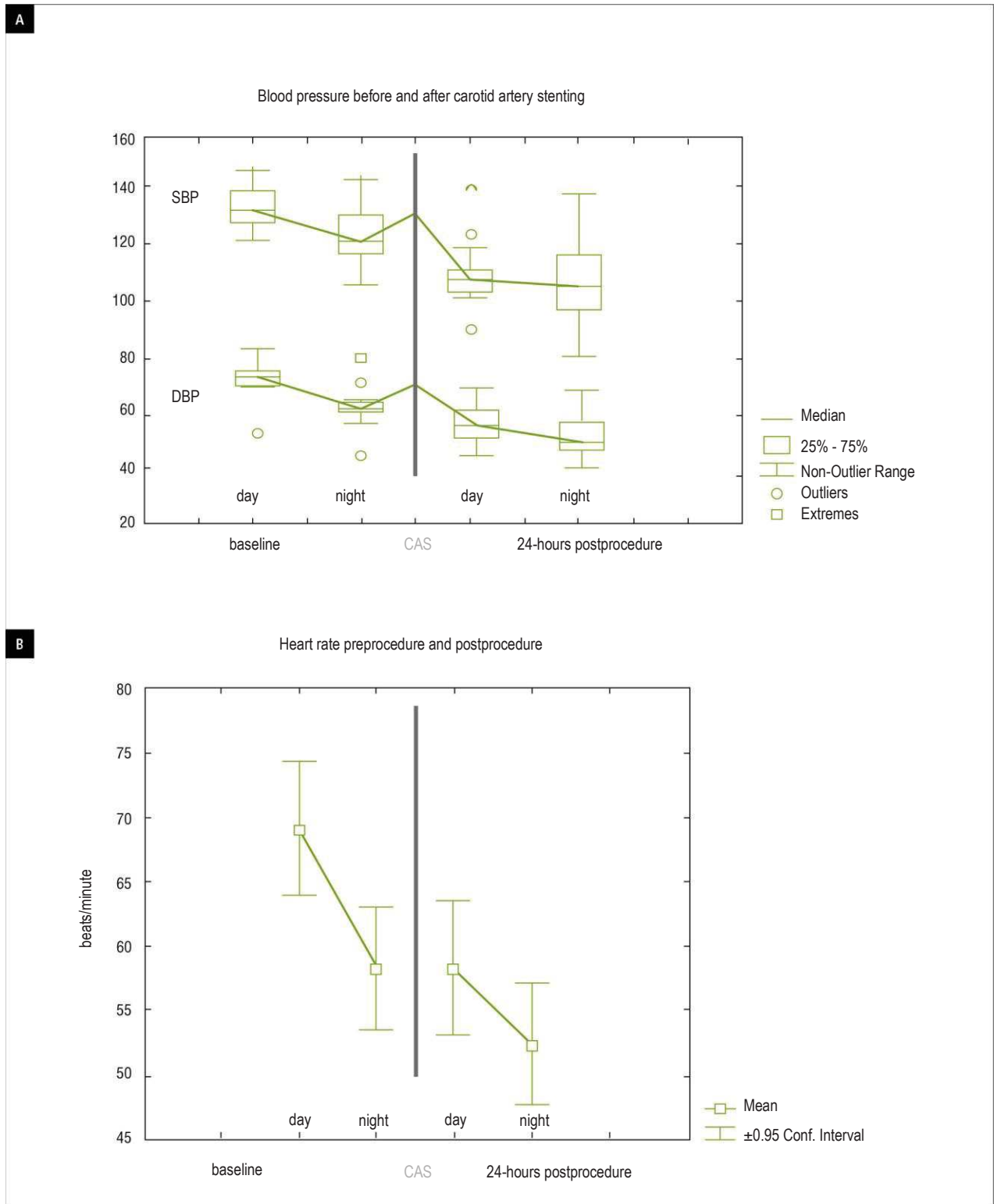


Figure 1. Comparison of baseline and postprocedural systolic (SBP) and diastolic (DBP) blood pressure (A) and heart rate (B)
Rycina 1. Porównanie podstawowego i pozabiegowego ciśnienia skurczowego (SBP) i rozkurczowego (DBP) (A) oraz tętna (B)

Discussion

The studies performed so far, show that HI following CAS occurrence is unpredictable, and that its association with adverse events has not been well defined. Our study revealed that postprocedural HI is a common phenomenon after CAS, however, it was not linked with neurological or other vascular complications in the studied cohort in short-term and long-term observation. We demonstrated that patients at risk of PH can possibly be identified through clinical and angiographic variables (no antihypertensive Ca antagonist treatment prior to CAS, hemodynamic instability during CAS, ulcerated ipsilateral plaque, or significant stenosis of contralateral carotid artery).

The most serious acute complication associated with CAS is stroke. Although the stroke rate is 3% - 4% and has steadily decreased with improvements in device technology and operator experience, risk factors for periprocedural stroke are not known [13]. Frequency: risk factors for other complications that are not specific to the approach to stenting, such as myocardial infarction, renal failure related to intraarterial contrast injection, carotid thrombosis and restenosis, and stent dislocation are also not known. Poorly controlled hypertension preoperatively is predictive of prolonged length of stay due to postoperative hypertension. It is therefore important to assess if aggressive preoperative antihypertensive drugs are related to risk of postprocedural HI [14]. Our data are in a line with Kojuri et al. who reported 63% of PH [15] and are similar to the published meta-analysis which showed overall HI rate of over 40%, however, pooled estimate for hypotension (12.1%) was lower than in our study (12.2% for bradycardia, 12.5% for both hypotension and bradycardia, persistent HI 19.2%) [16]. The Authors reported no statistically significant differences between patients either with or without HI after CAS with respect to death, stroke, TIA or major adverse events, but there were statistically significant associations of mean age with HI, of <10 mm distance between the carotid bifurcation and the site of minimum lumen diameter with bradycardia, and of prior ipsilateral CEA with persistent HI. On the other hand, one recent retrospective study on nearly 25,000 patients demonstrated that postoperative hypotension occurred in only 15% of CAS, and that patients with hypotension (compared to no hypotension) had higher rates of stroke, myocardial infarction, prolonged length of stay, and in-hospital mortality, and also that the risk factors associated with HI were atherosclerotic lesion, female sex, age >70, history of myocardial infarction or angina, and an urgent (vs elective) procedure [17].

The higher rate of PH in our study is probably related to the use of Holter monitoring which enabled us to

recognize all hypotension events occurring within 24 hours post CAS. The difference risks associated with intraprocedural hypotension may result from some technical differences between operating methods, contrast volume, and also the type of stent or embolic protection device used [18]. Furthermore, the degree of dilation may also increase the risk of PH [19]. The low rate of vascular events in our study is surprising, but it is probably related to low sample size and lower degree of baseline carotid stenosis [18]. The latter could suggest less severe cerebrovascular disease in our cohort than in other studies. Additionally, a higher incidence of PH could possibly have resulted in longer hospitalization, and thus better adjustment of medical treatment during the postoperative period. Extension of hospitalization duration due to hypotension has been frequently reported [5].

Our data demonstrate that hemodynamic instability occurred more often in the presence of ulcerated ipsilateral plaque or significant stenosis of the contralateral carotid artery. Similar findings have been previously reported by Gökçal et al. [5]. The reason is unknown, but probably it is related to the abnormal baroreflex response. Baroreflex response is probably involved in the genesis of hemodynamic reactions. The baroreflex is maintained through an afferent and efferent limb of a reflex arc. It provides feedback control to blood pressure regulation centers. The highest concentration of baroreceptors which are stretch receptors is in the carotid artery bulb. When they are stretched, a signal is sent via the glossopharyngeal nerve to the nucleus tractus solitarius, this inhibits the activity of sympathetic fibers within the nucleus, and concomitantly second order neurons excite synapses of the dorsal vagal nucleus. This results in increased vagal tone, increased parasympathetic activity and reduction in heart rate and blood pressure. The presence of calcified atheroma in the carotid artery chronically sensitizes the carotid baroreceptors to very small changes in the carotid artery tension. External manipulation in this area can therefore produce a marked hypotensive response. The chronic administration of Ca antagonists reduced the incidence of hypotension in our cohort. This finding is surprising, and to the best of our knowledge it has not been previously reported. This positive effect could possibly be explained by enhanced reflex response to sympathetic tone mediated by Ca antagonists. The limitation of the study is that since the sample is small, we might have missed the true characteristic of CAS population, so our results cannot therefore be generalized. Due to the low number of enrolled subjects we did not analyze risk factors for bradycardia nor the characteristics of carotid plaques. On the other hand our study has some strengths. We used BP Holter monitoring to assess HI, therefore we could

precisely diagnose PH or bradycardia events and also our subjects were followed for 6-months post CAS.

Conclusions

Postprocedural hypotension is a common phenomenon after CAS, but without increasing the perioperative risk. Patients at risk can possibly be identified through clinical and angiographic variables. PH was not linked with significant neurological complications within 6 months of observation. The protective role of Ca antagonists in the development of hemodynamic instability which was demonstrated in our study should be further evaluated.

References

1. Tydén G, Samnegård H, Thulin L, Muhrbeck O. Effect of carotid endarterectomy on baroreflex sensitivity in man. Intraoperative studies. *Acta Chir Scand Suppl*, 1980; 500: 67–69
2. Wallbach M, Halbach M, Reuter H, et al. Baroreflex activation therapy in patients with prior renal denervation. *J Hypertens*, 2016; 34 (8): 1630–1638
3. Rubio G, Karwowski JK, DeAmorim H, et al. Predicting factors associated with postoperative hypotension following carotid artery stenting. *Ann Vasc Surg*, 2019; 54: 193–199
4. Abou-Chebl A, Gupta R, Bajzer CT. Consequences of hemodynamic instability after carotid artery stenting. *J Am Coll Cardiol*, 2004; 43 (Sup. 1): A20–A21
5. Gökçal E, Niftaliyev E, Deniz Ç, et al. Prolonged hypotension after carotid artery stenting: incidence, predictors and consequences. *Acta Neurochir (Wien)*, 2017; 159 (11): 2081–2087
6. Kojuri J, Ostovan MA, Zamiri N, et al. Hemodynamic instability following carotid artery stenting. *Neurosurg Focus*, 2011; 30 (6): E12
7. Chang A, Hung HF, Hsieh FI, et al. Beneficial effects of prolonged blood pressure control after carotid artery stenting. *Clin Interv Aging*, 2017; 12: 103–109
8. Wytuczne Grupy Ekspertów Sekcji Chorób Naczyniowych Polskiego Towarzystwa Neurologicznego. *Neurol Neurochir Pol*, 2012; 46 (supl. 1)
9. Endarterectomy for asymptomatic carotid artery stenosis. Executive Committee for the Asymptomatic Carotid Atherosclerosis Study. *JAMA*, 1995; 273 (18): 1421–1428
10. McKeivitt FM, Sivaguru A, Venables GS, et al. Effect of treatment of carotid artery stenosis on blood pressure: a comparison of hemodynamic disturbances after carotid endarterectomy and endovascular treatment. *Stroke*, 2003; 34: 2576–2581
11. New G, Roubin GS, Iyer SS, et al. Safety, Efficacy, and Durability of Carotid Artery Stenting for Restenosis following Carotid Endarterectomy: A Multicenter Study. *J Endovasc Ther*, 2000; 7 (5): 345–352
12. Coward LJ, Featherstone RL, Brown MM. Percutaneous transluminal angioplasty and stenting for carotid artery stenosis. *Cochrane Database Syst Rev*, 2004 (2): CD000 515
13. Malas MB, Dakour-Arudi H, Wang GJ, et al. Transcarotid artery revascularization versus transfemoral carotid artery stenting in the Society for Vascular Surgery Vascular Quality Initiative. *J Vasc Surg*, 2019; 69 (1): 92–103.e2
14. Stoneham MD, Thompson JP. Arterial pressure management and carotid endarterectomy. *Br J Anaesth*, 2009; 102 (4): 442–452
15. Kojuri J, Ostovan MA, Zamiri N, et al. Hemodynamic instability following carotid artery stenting. *Neurosurg Focus*, 2011; 30 (6): E12
16. Mylonas SN, Moulakakis KG, Antonopoulos CN, et al. Carotid artery stenting-induced hemodynamic instability. *J Endovasc Ther*, 2013; 20 (1): 48–60
17. Noori VJ, Aranson NJ, Malas M, et al. Risk factors and impact of postoperative hypotension after carotid artery stenting in the Vascular Quality Initiative. *J Vasc Surg*, 2021; 73 (3): 975–982
18. Oshin O, Varcoe R, Wong J, et al. Multivariable analysis of patients with severe persistent postprocedural hypotension after carotid artery stenting. *J Endovasc Ther*, 2019; 26 (6): 759–767
19. Lavoie P, Rutledge J, Dawoud MA, et al. Predictors and timing of hypotension and bradycardia after carotid artery stenting. *Am J Neuroradiol*, 2008; 29 (10): 1942–1947

Recreational diving for women and children

Nurkowania rekreacyjne kobiet i dzieci

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Abstract Amateur diving, done for recreation or as a sport, is one of the activities which has recently been gaining popularity both in Poland and abroad. Until only a few decades ago, scuba diving was primarily the domain of healthy men of working age for whom underwater work was part of their job. Currently, scuba diving has become popular with individuals of all ages and both sexes. There is an increasing number of diving enthusiasts among women and children. Underwater sports and activities require good physical health, and therefore it is important to define clear contraindications to scuba diving, both diseases and physiological conditions (e.g. pregnancy). This paper presents issues related to recreational diving for women and children, taking into account physiological and psychological aspects, health assessment and contraindications to diving.

Key words: amateur diving, children, health assessment, women

Streszczenie Nurkowania amatorskie w wymiarze turystyczno-sportowym są jedną z aktywności zyskujących coraz większą popularność w Polsce i na świecie. Jeszcze kilkadziesiąt lat temu nurkowania były głównie domeną zdrowych mężczyzn w wieku produkcyjnym, realizujących zadania podwodne w ramach pracy zawodowej. Obecnie w akwenach wodnych zanurzają się przedstawiciele obu płci, we wszystkich przedziałach wiekowych. Coraz więcej amatorów nurkowania spotyka się wśród kobiet i dzieci. Aktywności podwodne wymagają dobrego stanu zdrowia i określenia jasnych przeciwwskazań zdrowotnych, którymi mogą być zarówno choroby, jak i stany fizjologiczne (np. ciąża). W pracy przedstawiono zagadnienia związane z nurkowaniem rekreacyjnym kobiet i dzieci z uwzględnieniem aspektów fizjologicznych, psychologicznych, kwalifikacji oraz przeciwwskazań do nurkowania.

Słowa kluczowe: nurkowania amatorskie, kwalifikacja, kobiety, dzieci

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Diving for women

The greatest increase in the number of women diving in swimming pools around the world occurred in the late 20th century. According to statistics reported in western countries, in the early 1970s one woman for every five men took part in diving courses, and in the early 1980s there was already one woman for every three men. Data from the USA showed that the number of women divers increased from 8.8% in 1991 to 25% in 1994. In 1990, the British Sub Aqua Club (BSAC) had 14% female members, and in 1994 it had 20%. Among BSAC instructors, 17% were women and

among diving students as many as 35%. Currently, women make up 30% - 50% of recreational divers. Of the 35% of women divers in PADI (Professional Association of Diving Instructors), about 20% are professionally involved in diving, among diving instructors 13% are women. Among divers insured with DAN (Divers Alert Network) USA 36% are women.

The widespread presence of women in the diving community in the early days gave rise to many problems. Until a few decades ago, equipment, diving techniques and decompression tables were exclusively designed for men. Anatomical and psychophysiological differences between men and

women clearly favoured the former in terms of adaptation to the underwater environment. The menstrual cycle, the use of oral contraceptives and a weaker physical condition are all elements that pose significant limitations. They require a woman to overcome her weaknesses and to have solid diving training [1,2].

Physiological differences

Typically, women do not have as much muscle strength and agility as men. For this reason, they are less often employed as professional divers – they are more likely to participate in recreational diving. Statistically, a woman achieves less physical fitness than a man due to a proportionally smaller cardiovascular, respiratory and musculoskeletal system. Physiologically, women have less potential for muscle strength, speed and endurance than men. In proportion to their height, the heart, lungs and chest of a woman are smaller than for a man, their stroke volume is also smaller. For this reason, women are usually unable to reach the maximum oxygen uptake levels of men. They also show a lower oxygen demand at rest. The basic metabolism of women is slightly lower than that of men, and they generally consume less energy for muscular work. Their nutritional requirements are also correspondingly lower, and amount to about 83% of a man's requirements, i.e. about 2,000–3,000 kcal/d. The female body has more body fat and less muscle mass than the male body. On average, body fat accounts for 25% of a woman's body weight. It can decrease to about 10% - 15% of body weight in women who are active in sports (which is still almost double that of an average man). More body fat helps to increase a woman's buoyancy. Muscle mass in women accounts for around 23% of weight compared to 40% in athletic men. Thermal regulation of the female body is slightly different to that of a man. With less muscle mass and lower tissue metabolic activity, women generate less heat during physical activity. Thicker subcutaneous fat tissue than in men does not provide adequate protection against heat loss in women. The female body has a greater tendency to contract blood vessels in the extremities. This is a reaction that reduces heat loss from the body. In women, this is insufficient to significantly affect the slower cooling down of the body. A woman's mechanisms to compensate for the rapid loss of heat are worse than those of men. Men show better adaptation to cold due to greater physical activity and involvement in sport activities. Lower physical activity and lack of acclimatisation to low temperatures explain the higher susceptibility of women to overcooling and

hypothermia. Slender women are particularly susceptible to hypothermia. However, observations show that women tolerate the state of prolonged hypothermia better than men. Overheating and hyperthermia also occur more easily in women, especially when diving in tropical waters. The number of sweat glands plays a decisive role in this respect (men physiologically have a higher number of glands and under high ambient temperature conditions sweat is excreted earlier, which reduces the risk of hyperthermia) [2-5].

Menstrual cycle and diving

It is now considered that monthly bleeding is not a contraindication to diving, but it is a discomfort for the woman (which can be significantly reduced by using tampons during diving). During monthly bleeding, many women are not on best form physically and mentally. Feeling unwell, muscle cramps, headaches, nausea or vomiting may threaten those diving women who experience these menstrual symptoms. Massive monthly bleeding can also limit a woman's physical performance. In a survey conducted by Dowse et al. among more than 1,000 diving women during their monthly cycle, only 7% of women abstain from diving and 12% dive more conservatively. Approximately 71% of the women experienced premenstrual syndrome, but only 34% of them subjectively felt its adverse effects on performance during diving. Approximately 40% of women exhibited exaggerated agitation, light-headedness, loss of self-control, feeling cold and a tendency to panic during their menstrual bleeding [2,4,6].

In women who dive in tropical waters, there are concerns about diving during menstrual bleeding because of the possibility of shark attacks. However, these fears seem unfounded, as numerous statistics have not found an increased number of shark attacks on women who swim in the sea during their menstrual periods.

Another issue is the use of various contraceptives by female divers and their effect on the body during diving. Some researchers have argued that the use of oral hormonal contraceptives may increase susceptibility to decompression sickness due to changes in blood clotting that occur during the use of these drugs. To date, however, no convincing evidence has been presented to support this claim. Analysis by Fife et al. of over 1,000 female divers did not find a higher incidence of decompression sickness among those using oral contraceptives [2].

In contrast, the Divers Alert Network published data on the effect of monthly bleeding on the incidence of

decompression sickness. Between 1989 and 1995, 956 cases of decompression sickness were reported in women. As many as 38.2% of these were in their monthly bleeding period at the time of onset. In another study 21.6% of 654 women aged 13-51 years who developed decompression sickness were menstruating. In this group 261 women were taking oral contraceptives and up to 85.5% of them were menstruating at the time of the illness. This data suggests that taking oral contraceptives increases the risk of developing decompression sickness. A reduction in monthly bleeding time from 5-7 to 3-4 days was also observed in this group [2,6-8].

IUDs are a popular contraceptive. They have not been found to increase the risk of decompression sickness, but their presence in the reproductive tract allows backward movement of water and increases the possibility of developing an infection.

Decompression sickness in women

The first decompression tables were calculated, tested and designed for young and fit men. More recently, they have been widely used by women in sport and scientific diving. A higher incidence of decompression sickness has also been observed in women than in men after dives under similar conditions. To date, however, no reliable studies have been presented to accurately determine whether women are more susceptible to pressure sickness than men with similar physical condition, amount of body fat and age. The average amount of body fat in women is about 25% of body weight, whereas in men it is only about 14%. It is known that susceptibility to decompression sickness increases with an increase in the amount of body fat, and it is logical that for this reason women are expected to be more susceptible to the disease.

The rhythm of a woman's sex hormones and changes in the coagulation system which they cause, suggest an increased risk of developing decompression sickness, but available research has not clearly explained this point.

Another factor being considered is women's use of oral hormonal contraceptives. The influence of the premenstrual period on the incidence of decompression sickness is also considered. During this period, women experience more fluid retention and premenstrual oedema. This phenomenon facilitates the formation of gas bubbles. In a small study on this issue, Bangasser et al. observed 680 female diving instructors in 1978 and found a 3.3-fold increase in the number of cases of diagnosed or suspected decompression sickness as compared to male diving instructors. The results presented here were obtained

from questionnaires completed by divers. However, these results may not be fully reliable as they are not supported by other observations. During the 'Hydrolab' programme in the early 1970s, none of the 285 men and 58 women had symptoms of decompression sickness [9,10]. Zwinglerberg et al. analysed a large group of divers of the U.S. Navy who performed air dives in the 36-86 m depth range and heliox dives in the 36-91 m depth range. In 988 dives performed by women, there was no incidence of decompression sickness, while 1.3% of men developed the condition. After 60 dives made in pairs (man and woman) under the same conditions, symptoms of decompression sickness occurred in 2 men. According to other data presented by Bass based on more than 15,000 dives related to archaeological explorations involving about 20% of women, no case of decompression sickness was reported in any of them, but it was found in two men [7]. In an analysis by Fife et al. of approximately 10,000 dives at depths of 30-58 m, where 33% of the divers were women, the rate of decompression sickness in women was similar to that in men, at 0.03% and 0.04% respectively. In a 1995 British study of 2,250 divers, 46% of whom were women, the incidence of decompression sickness among men was 2.6 times higher than among women. Conversely, in a 1992 Australian study based on an analysis of 111 cases of decompression sickness, the incidence among women was 4.3 times higher than among men [2,7,10]. Analyses of the incidence of decompression sickness after tens of thousands of exposures in pressure chambers showed no significant differences between men and women. However, Dunford et al. observed that in a group of women who had monthly bleeding during pressure chamber exposure, the risk of developing decompression sickness increased nearly eightfold. However, they did not find such a relationship with regard to developing decompression sickness after diving in natural, i.e. 'wet', conditions [6].

It has been observed that blood flow in peripheral blood vessels is altered in women during menstrual bleeding, which may be further adversely affected by exposure to cold during diving. The consequence of altered vascular regulation mechanisms may be a greater tendency to decompression sickness during monthly bleeding. In studies on the cold response of the human body, it has been found that blood flow through the fingers ceases in men at a mean temperature of 13.7°C, in women at 18.1°C and at 26.0°C during monthly bleeding. However, data available from numerous studies does not indicate that the above changes increase the risk of decompression sickness during monthly bleeding [2].

The studies available to date have not found a sufficient explanation for the differences in the incidence of decompression sickness between men and women. Differences in body fat, low body weight, fluid retention, peripheral arterial vasospasm, limb blood flow, hormonal effects, platelet aggregation and complement levels have been considered. However, none of the above factors correlated clearly with the frequency of decompression sickness in men and women.

In conclusion, it has not been clearly explained whether women are more susceptible to decompression sickness than men. The Dowse study found that women are more likely than men to dive to depths that do not require decompression stops. Most women make only one dive a day (67%), while the same proportion of men dive several times a day. This creates a lower risk of developing decompression sickness. Decompression sickness among women after dives not requiring decompression stops affects less than 0.1% of dives. Nevertheless, in relation to the absolute number of dives, Dowse found a higher incidence of decompression sickness among women, especially those with less diving experience. More cases of type II decompression sickness are observed among women [2,5].

Many women dive using the same decompression tables as men and consider them quite safe. However, when embarking on cold water dives or heavy underwater work, it is important to remember to ascend according to the extended decompression rule. Workman, an eminent expert on decompression issues for divers, suggests that for dives where decompression stops are not necessary, the voluntary execution of a 2-5 minute stop at 3m may increase safety for all divers. He believes that a reasonable protection against decompression sickness for women who are premenstrual, menstruating or taking oral hormonal contraceptives is to set the ascent according to the extended decompression rule [3,4,7].

Pregnancy and diving

Diving, like swimming, may seem like a pleasant activity for a pregnant woman. However, it is important to consider whether it is worth exposing the baby, a passive participant in diving, to the risk of permanent injury for the sake of short-term pleasure. There are well-founded concerns that the conditions experienced during diving or in pressure chambers can cause serious problems for pregnant women. Animal experiments have confirmed that hyperbaria and high partial pressures of oxygen can affect the development of malformations as well as the health and survival of

the foetus. In experiments on pregnant animals, after exposures to 100% oxygen at 2-4 ATA for 3-6 hours, cardiovascular malformations, extracapsular fibrosis and even increased foetal resorption rates were found. In a study by Gilman et al. following exposure of pregnant hamsters according to U.S. Navy treatment, table 6, no increased number of defects or malformations were demonstrated in the born offspring [11].

Data on the effects of high oxygen pressures on the human foetus is very limited. During the first three months of pregnancy, exposures to high oxygen pressures resulting from compressed air breathing by a diving woman can be particularly dangerous to the human foetus. There is data in the literature about serious and numerous birth defects in children of women who dived intensively during the first weeks of pregnancy. There is a known case of a young woman who made 20 dives in 15 days at a depth of 18-33 m and ascended at a speed of 18 m/min. At that time she was 3-5 weeks pregnant. The pregnancy proceeded without any problems. The baby was born on time with many congenital defects of the skeletal, muscular and urinary systems.

In the following months of pregnancy, due to changes in the placenta, the foetus reacts less to changes in the mother's circulation. However, if the female diver requires recompression treatment due to decompression sickness or air embolism, then the foetus may be exposed to significant oxygen and nitrogen pressure. This can cause serious clinical problems that are difficult or impossible to solve for the doctor caring for the patient. The first extensive studies on the effects of oxygen hyperbaria on a pregnant woman and her foetus were carried out by Assali et al. in 1968. They found that under oxygen hyperbaria at 3 ATA, the maternal blood oxygen pressure reaches 1,300 mm Hg, in the umbilical vein 300 mm Hg, and in the foetal umbilical artery only 50 mm Hg. At the same time, blood flow through the placenta and umbilical cord decreases slightly. An increase in foetal blood oxygen pressure causes vasodilation of the pulmonary placenta and changes the foetal blood circulation to that of the neonatal period. When the foetal blood oxygen concentration returns to normobaric values, the foetal blood circulation also returns to its original circulation. Data available from hyperbaric oxygen treatment of pregnant women with carbon monoxide poisoning did not reveal foetal harm as a consequence [12]. In their study on a large group of diving women, Bangasser et al. found no increased number of miscarriages or defects in children born to diving women [9]. In another study, Bolton observed a higher number of newborns with low birth weight, respiratory

problems at birth and major birth defects in women who continued to dive during pregnancy. The defects found were spina bifida, missing hand, ventricular septal defect, aortic stenosis, oesophageal stenosis and multiple skin nevi. Pregnant women performed deep dives at depths ranging from 30-50 m. No severe malformations were detected among children of women who stopped diving after pregnancy was confirmed [13].

Rankin's 1980 study included 109 female sport divers who continued diving during pregnancy. There were 6 cases of births of children with birth defects, which accounted for 5.5% of the total number of births. In the corresponding group of women who gave up diving during pregnancy, no case of birth of a child with a birth defect was found. For these reasons, it is recommended that pregnant women do not dive [2,4].

Another danger for the foetus, and a cause of disorders, is hypoxia, which occurs during swimming training in independent diving apparatuses at any depth. Hypoxia occurs during breath-hold diving training and during sudden interruption of air supply. The stimulation associated with diving, exposure to low temperature, and the diving reflex cause marked vasoconstriction. This can significantly reduce blood flow through the uterus and placenta, thereby causing reduced blood supply and foetal hypoxia. Free diving, during which hypoxia may occur and/or gas bubbles may form, is potentially harmful to the foetus. An analysis of Korean women, who dive while holding their breath for up to several days before delivery, found as many as 44.6% of preterm neonates with birth weights <2.5 kg compared with 15.8% of Korean women who do not dive [2,4,13].

One of the characteristic symptoms occurring during pregnancy is a tendency to fluid retention and oedema as well as an increase in body fat up to 33% - 36% of body weight. The retained fluids and increased amount of adipose tissue are an additional reservoir for dissolving inert gas – nitrogen. Therefore, the desaturation of the pregnant woman's body from nitrogen will require a much longer period of time. Fluid retention may also cause swelling of the mucous membranes of the nasal cavity and throat, causing difficulties in blowing and increasing the risk of pressure injury to the ear and paranasal sinuses [2,4,7].

The phenomenon of decompression sickness in the foetus is an interesting issue. It is not possible to observe this disease in a human foetus. Therefore, many experiments have been conducted on pregnant animals. The blood circulation in the foetus is different from that in postnatal life. The blood circulates without passing through the lungs, so that the foetus's body is

deprived of a natural filter for gas bubbles. The gas bubbles formed in this way easily enter the arteries of the brain or the coronary arteries. They easily cause damage to vital organs and contribute to intrauterine death of the foetus due to decompression sickness. This shows that a single gas bubble in the vessels of the foetus is more dangerous than many gas bubbles in the mother's body.

Very disturbing results have been obtained when pregnant sheep, whose placenta has a structure similar to that of the human placenta, were exposed under different conditions. After simulated dives as deep as 18 m, gas bubbles were found in the blood of sheep foetuses. The foetuses developed with various defects or died before birth. Several sheep miscarried or gave birth prematurely to foetuses with decompression sickness symptoms a few hours after the simulated dive [2,7,13].

The current view is that pregnant women should not dive. Those who wish to continue underwater activities should limit dives to depths <9 m. Diving should always take place in known and safe bodies of water, accompanied by a second, preferably experienced diver. Equipment should be in good working order and diving conditions such that the possibility of a diving accident or aspiration of water into the airway is minimised.

In 1978 the Undersea Medical Society held a working meeting on diving during pregnancy. Participants at the meeting unanimously concluded that pregnant women should refrain from diving until thorough and rigorous research had been conducted. The U.S. Naval Diving and Salvage Training Center does not allow pregnant women or those using oral hormonal contraceptives to dive [2,14-16].

Underwater activity after childbirth should be undertaken no earlier than four weeks after an uncomplicated natural childbirth. Such a period is necessary for good uterine contraction and cervical closure. After termination of pregnancy by caesarean section, return to diving requires 8-12 weeks of convalescence. During this time, the postoperative wound heals, blood loss is restored, and the patient returns to pre-partum strength and physical performance [17].

Diving for children

In 1999 the Council of Experts on Recreational Diving Training set the minimum age for training and certifying children at 15 years. However, the major dive training organisations a few years later significantly lowered the age limits for certifying diving children. For example, PADI Seal Team and SSI SCUBA Rangers

offer training for children from the age of 8, and Junior Open Water Diver certification at the age of 10. In turn NAUI and YMCA start diving training for children only after they turn 12.

Polish regulations allow children to start diving lessons after the age of 10. However, there are known cases of children diving at the age of four. Dives always take place in the company of an instructor at shallow depths [1,18-20].

Adults are aware that diving is dangerous and can affect health. So they want to know when their children can start diving without suffering harm to their health. However, despite the fascination with diving, children must not be forced into it. The young person must be decide for him or herself. A minor must not begin diving a result of a command or threat from a parent enthusiastic about diving.

To date there are no documented medical studies that diving is harmful to children. We can expect that there will never be such studies because they are expensive, would require many years of observation of diving children, and above all are medically unethical. Most of the world's medical authorities are against children diving in self-contained diving apparatus using compressed breathing gases.

Psychological aspects

Encouraging and involving children in recreational diving is an idea and a trend inspired by profit-hungry organisations and dive centres. There is never any benefit to diving where children are concerned, except perhaps to satisfy a parent's inflated ego, and it always involves significant risk. It is important to remember that children are not 'little adults'. They do not think and act like adults. They show different emotions and react differently to stress than a mature person. Preaching the idea of physically, mentally and psychologically mature children, i.e. a young boy or young girl, being able to dive, is an absolute contradiction. A certain emotional maturity and the ability to learn and understand the minimum necessary knowledge of physics, physiology and the diving environment are required for children to dive safely. The most important thing is to understand the principles of compressed air dynamics and the dangers involved. It is necessary to reduce the level of fear associated with diving, to have a high level of trust in the instructor and to be mentally prepared to manage stress and act in emergency situations [1,18]. Communication with the young diver must be specific, enabling him/her to properly comprehend what tasks to perform and what potential problems may arise. A young diver may acquire the necessary theoretical knowledge well (e.g. laws of

physics), but this does not at all mean that he or she will be able to apply them in practice with understanding. Therefore, the limits of underwater activities must be strictly defined, for it is difficult to expect a child to react appropriately in life-threatening situations. After all, a child cannot burst into tears underwater! A child of 7-12 years of age who thinks in concrete and visual terms is not able to consider various hypotheses, consider multiple possibilities in a plan of action, solve problems systematically, or use combinational logic. The transition of a young person to a higher level of thinking, i.e. verbal-logical, more abstract thinking, occurs only at the age of 15-17. On the other hand, adolescents who reach puberty earlier than their peers are more likely to engage in a variety of risky activities that threaten their health and life. When a young diver is sufficiently informed about the risks associated with diving, the claim 'It can't happen to me!' seems very risky, especially since the understanding of the dangers involved may be highly questionable. Making a decision to dive based on a 'need for new experiences and sensations' often puts young divers who are not fully aware at risk. Denying the existence of risks can become very painful. It is unethical to put young people at risk from diving injuries, including pressure injuries and decompression sickness. Proponents of child diving say that children can dive to small safe depths. However, they forget that small safe depths do not exist when diving with compressed air. Lung pressure injury can even occur with an unfortunate ascent from a depth of 120 cm - a very small and seemingly safe depth [19,21].

In studies of recreational divers who have experienced decompression sickness, adverse personality changes such as character change, depression and paranoia have often been found. The appearance of behavioural changes suggests the presence of permanent changes in brain structures. Is this not reason enough to stop teaching children to dive? Surely it is, after all it is about MY CHILD! Surely it is, because of the high risk of fully unknown consequences of the impact of a possible diving injury on the personality development of the juvenile diver [21,22].

Physiological aspects

It goes without saying that the body of a child or adolescent about to embark on a dive must be healthy and free of any medical condition that could affect their safety during diving. Similar health restrictions apply to young bodies as for adults. It is the responsibility of physicians examining and qualifying juveniles for

diving to show great care. Age and health requirements for children should be strictly adhered to [23,24]. Middle ear infections are common in childhood. Children with a history of ear infections may have problems with adequate Eustachian tube patency. In addition, children under 12 years of age find it more difficult to equalize middle ear pressure, i.e. perform the Valsalva manoeuvre, because their Eustachian tube is horizontal with respect to the eardrum cavity. The presence of several factors such as a short and horizontally positioned Eustachian tube, difficulty in equalizing middle ear pressure, inadequate instruction on how to do so, and forcibly performing the Valsalva manoeuvre, are reasons for the more frequent occurrence of ear pressure injuries in diving children.

Furthermore, forcibly performing the Valsalva manoeuvre in the presence of a PFO, a persistent oval hole in the atrial septum of the heart (more common than in adults), poses a high risk of gas bubbles passing through the open valve into the arterial part of the circulatory system and causing a cerebral form of decompression sickness. Young neural tissue is very vulnerable to damage, thus increasing the risk of permanent brain damage in the young diver [1,7,19,22-24]. Allowing young people, in whom the skeletal growth process is not yet complete, to dive raises most concerns about the possibility of gas bubbles damaging the epiphyseal cartilages of the long bones. For this reason young people should dive within limits that prevent decompression sickness, i.e. not exceeding a depth of 9 m [19,22,24]. Furthermore, when considering theoretically what is so far established by science in terms of the effects of high gas pressures, we know that oxygen has an adverse effect on cells and tissues. High oxygen pressures during diving have an effect on changes in the formation of young bone tissue, but unfortunately, the consequences of this for the growing organism are not yet known. Furthermore, it has a strong mutagenic effect, i.e. it influences the formation of pathological cells and acts as a sensitive mediator of metabolic reactions. The influence of each of these factors on the development of the young human organism is not known.

A considerable problem that needs to be solved before a young person dives is the acquisition of appropriate diving equipment. It is unacceptable for a young person (of small height and weight) to dive in the equipment of an 'older brother'. An oversized wetsuit, buoyancy waistcoat, diving cylinders and fins can make diving very dangerous. Due to the frail body structure and low muscle strength, it can be a big problem for a young diver to put on and carry heavy

diving equipment. This can cause injuries even before entering the water.

As children and young people are prone to rapid heat loss whilst in the water, good protection against hypothermia is essential, which is best provided by a fitted wetsuit. The small body mass and heavy weight of diving equipment create problems in properly balancing a young diver. Negative buoyancy will result in the loss of a considerable amount of energy 'to fight' against a descent to the bottom. For this reason, before diving in open water, a young diver should get a good grip on their buoyancy in pool conditions or in shallow water. Too large a buoyancy waistcoat and diving cylinders can change their position and significantly impede underwater movements. Standard equipment is designed for people who are at least 150 cm tall and 45 kg in weight. For a young person with a petite body build, equipment should be prepared to suit him or her to make diving as comfortable as possible [25,26].

In diving accident statistics the number of fatal injuries in children aged 10-15 years is increasing. Arterial gas embolisms due to lung pressure injury predominate. Children's airways are narrower, which may favour this injury. The youngest child to die after diving in a self-contained diving apparatus was 7 years old. For the above reasons, doctors who specialise in this area believe that diving with compressed air by children under 16 years of age is highly reckless. Until sufficient emotional and mental maturity is reached, children should only dive with a breathing tube [25-27].

Literature

1. Krzyżak J, Korzeniewski K. *Medycyna dla nurkujących* [Medicine for divers]. 4Font Publishing House, Poznań 2020: 164-179
2. Fife CE, St Leger Dowse M. *Women and Pressure: Diving and Altitude*. Best Publishing Company 2010
3. Kizer KW. Women and diving. *Phys Sportsmed*, 1981; 9 (2): 84-92
4. Cresswell JE, St Leger-Dowse M. Women and scuba diving. *Br Med J*, 1991; 302 (6792): 1590-1591
5. St Leger Dowse M, Bryson P, Gunby A, Fife W. *Men and women in diving*. Diving Diseases Research Centre, Fort Bovisand, Plymouth, Devon, UK 1994
6. Dunford RG. Survey of females diving during menses. *Undersea Hyperb Med*, 1993; 20 (suppl): 70
7. Zwingelberg KM, Knight MA, Biles JB. Decompression sickness in women divers. *Undersea Biomed Res*, 1987; 14 (4): 311-317
8. Bennett PB, Moon RE. Diving accident management. Proc. 41st UHMS Workshop, Durham NC 15-16 Jan 1990. UHMS Publication Nr. 78, Bethesda 1990
9. Bangasser SA. Medical profile of the woman scuba diver. In: National Association of Underwater Instructors Proceeding of the 10th International Conference on Underwater Education, NAUI, Colton Ca., 1978: 31-40
10. Boussuges A, Retali G, Bodéré-Melin M, et al. Gender differences in circulating bubble production after SCUBA diving. *Clin Physiol Funct Imaging*, 2009; 29 (6): 400-405

REVIEW ARTICLES

11. Gilman S, Bradley M, Greene K, Fischer G. Fetal development: Effects of decompression sickness and treatment. *Aviat Space Environ Med*, 1983; 54: 1040-1042
12. Assali NS, Kischbaum TH, Dilts PV. Effects of hyperbaric oxygen on uteroplacental and fetal circulation. *Circ Res*, 1968; 22: 573-588
13. Bolton ME. Scuba diving and fetal well-being: A survey of 208 woman. *Undersea Biomed Res*, 1980; 7: 183-189
14. St Leger Dowse M, Gunby A, Moncad R, et al. Scuba diving and pregnancy: can we determine safe limits? *J Obstet Gynaecol*, 2006; 26 (6): 509-513
15. Conger J, Magann EF. Diving and pregnancy: what do we really know? *Obstet Gynecol Surv*, 2014; 69 (9): 551-556
16. Reid RL, Lorenzo M. SCUBA diving in pregnancy. *J Obstet Gynaecol Can*, 2018; 40 (11): 1490-1496
17. Bennett PB, Cronje FJ, Campbell ES. Assessment of diving medical fitness for SCUBA divers and instructors. Best Publishing Company 2006
18. Panchard MA. Children and scuba diving. How to start? *Rev Med Suisse Romande*, 2002; 122 (12): 589-593
19. Tetzlaff K, Muth CM, Klingmann C. Diving fitness of children and adolescents. Importance for ENT doctors. *HNO* 2008; 56 (5): 493-498
20. Winkler BE, Muth CM, Tetzlaff K. Should children dive with self-contained underwater breathing apparatus (SCUBA)? *Acta Paediatr*, 2012; 101 (5): 472-478
21. Morgan WP. Anxiety and panic in recreational scuba divers. *Sports Med*, 1995; 20 (6): 398-421
22. Lemaitre F, Carturan D, Tournay-Chollet C, Gardette B. Circulating venous bubbles in children after diving. *Pediatr Exerc Sci*, 2009; 21 (1): 77-85
23. Winkler BE, Tetzlaff K, Muth CM, Hebestreit H. Pulmonary function in children after open water SCUBA dives. *Int J Sports Med*, 2010; 31 (10): 724-730
24. Cilveti R, Osona B, Peña JA, et al. En representación del Grupo de Técnicas de la Sociedad Española de Neurología Pediátrica. Scuba diving in children: Physiology, risks and recommendations. *An Pediatr (Barc)*, 2015; 83 (6): 410-416
25. Vann RD, Lang MA. Recreational diving fatalities. Workshop proceedings. April 8–10, 2010. Durham, NC, Divers Alert Network 2011
26. Day C, Stolz U, Mehan TJ, et al. Diving-related injuries in children <20 years old treated in emergency departments in the United States: 1990–2006. *Pediatrics*, 2008; 122 (2): e388–394
27. DAN Annual Diving Report 2016 Edition. 2014 diving fatalities, injuries and incidents. Divers Alert Network, Durham, NC 2016

Initial diagnosis of blood disorders

Wstępna diagnostyka chorób krwi

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Abstract The final result of treatment of the majority of neoplastic and non-neoplastic blood disorders depends on their early diagnosis and immediate referral to a haematologist. This determines that initial haematological diagnosis has to be carried out on the level of a family physician or other doctor, who in the process of diagnosing a different disorder will detect abnormalities that may suggest a blood disorder. The current article concerns the use of a triad of laboratory tests: complete blood count, erythrocyte sedimentation rate, and urine analysis. Borderline values are provided that should prompt referral to a haematologist, and it is explained why these particular values were adopted. Common use of such information should shorten the time from initial symptoms of blood disorders to the beginning of treatment.

Key words: complete blood count, erythrocyte sedimentation rate, urine analysis

Streszczenie Ostateczny wynik leczenia większości nowotworowych i nienowotworowych chorób krwi zależy od ich wczesnego wykrycia i szybkiego skierowania do hematologa. Oznacza to, że wstępna diagnostyka hematologiczna musi się odbywać na poziomie lekarza rodzinnego lub innego lekarza, który w trakcie diagnostyki innego schorzenia wykryje zaburzenia mogące sugerować chorobę krwi. Obecny artykuł dotyczy wykorzystania do tego celu triady badań: morfologii krwi, OB, i badania ogólnego moczu. Podano progi ilościowe zaburzeń, które powinny skutkować skierowaniem do hematologa, oraz wyjaśniono, dlaczego takie właśnie wartości przyjęto. Powszechne wykorzystanie tych informacji powinno skrócić czas od wystąpienia objawów chorób krwi do rozpoczęcia leczenia.

Słowa kluczowe: morfologia krwi, odczyn Biernackiego, badanie ogólne moczu

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Introduction

Blood diseases – both malignant and non-malignant – are a significant problem not only because of their incidence but because many of them lead to death in a relatively short time. There are few studies in the literature on early laboratory diagnosis of these diseases, and this justifies the current proposal, except that it does not include blood coagulation diseases, as this is a separate and very broad issue [1].

In short, the current proposal is to perform a triad of tests at least once a year. This triad includes complete blood count, erythrocyte sedimentation rate (ESR) and urinalysis. The cost of performing the tests included in this triad is PLN 15-25. I will discuss the role, advantages and limitations of each of these methods.

Complete blood count

A complete blood count result, currently performed almost exclusively with autoanalysers, includes three groups of parameters: white blood cell, red blood cell and platelet parameters. From a preliminary diagnostic point of view, the graphs often found on the printouts of these results can be omitted and we can concentrate on the values of the individual parameters. In addition to the values themselves, the printouts usually show the reference range for the parameter in question and an interpretation. An above-normal result is marked with either an upward arrow or the letter H (for high). A below-normal result is marked with either a downward arrow or the letter L (for low).

White blood cell parameters include the absolute white blood cell count [2] and the absolute numbers of neutrocytes, lymphocytes, monocytes, eosinophils and basophils. They also include percentage values of the different types of white blood cells. These values can be completely disregarded - they are of historical

importance and date from a time when the individual types of these cells were not determined separately, but were calculated from the absolute white cell count and the percentage value obtained from the smear count. Neutrocytes are not percentages of lymphocytes and vice versa. They are different cells, produced by different mechanisms and disrupted by different causative factors. This also applies to all other types of white blood cells. It must also be remembered that the cells counted by the apparatus in the monocyte and lymphocyte windows are not always these cells, as the apparatus does not distinguish between pathological cells, such as leukaemic blasts.

The absolute white blood cell count is only useful if the absolute numbers of the different types of white blood cells are not determined, and if it is found to be abnormal, one should start by determining them.

The absolute number of neutrocytes can be increased by their reaction to an inflammatory process (leukaemoid reaction), but also as a result of a blood malignancy such as chronic myeloid leukaemia, less commonly other leukaemias. The leukaemic origin of neutrocytosis will be indicated by a concomitant increase in monocytes and/or basophils and values exceeding 20 G/l. Further diagnostics are within the domain of the haematologist. Conversely, a decreased neutrocyte count, if moderate (between 1-2 G/l), is most often not pathological [3,4]. This is known as innocent neutropenia, resulting from a different distribution of these cells. The peripheral blood is not the target site of their function, but only a transitive site between the bone marrow and the tissues in which these cells function to fight local infections. This is resolved by a negative response to an increased incidence of bacterial and fungal infections in such a patient, and in doubtful cases by a prednisone/hydrocortisone test [5]. Values <1 G/l, especially <0.5, require a haematological diagnostic workup.

Another parameter is the absolute lymphocyte count. The finding of an isolated increase in this number >5 G/l suggests the presence of chronic lymphocytic leukaemia or, much less frequently, other chronic leukaemia, and in only about 1% of cases a post-infectious reaction [6]. On the other hand, a decrease in this number may be a consequence of HIV infection [7], less frequently a symptom of Hodgkin's lymphoma, and first requires exclusion of the said infection. A value <0.5 G/l is quite characteristic for AIDS.

Any increase in the absolute number of monocytes [8] should first result in ordering a microscopic smear to clarify whether these are in fact monocytes. The apparatus also includes pathological cells in this

category, especially leukaemic blasts. But even if they look like typical monocytes under the microscope, they may still be leukaemic monocytes. There are no common conditions of decreased monocyte counts, nor are there conditions of decreased eosinophils or basophils. However, an increase in eosinophils [9] >1.5 G/l may indicate a neoplastic hypereosinophilic syndrome for differentiation with parasitic infection or allergy. In differentiating from the latter condition, it is useful to determine IgE levels, which will be increased in the case of allergy. The finding of an excess of basophils (>0.1 G/l) may also suggest a neoplastic disease involving this hematopoietic line.

Red cell parameters are divided into determined (red cell count, haematocrit, haemoglobin concentration) and calculated (mean corpuscular volume, mean haemoglobin concentration per cell). The best parameter for determining red cell excess is haematocrit, as it provides information on the total mass of these cells in the blood, and thus on the capillary flow disturbances caused by this mass. In contrast, the best parameter for determining their deficiency is the haemoglobin concentration, since it is this protein that actually does the work assigned to these cells, i.e. the transport of gases. In general, a haematocrit value > 53% requires referral to a haematologist and a value > 56% requires emergency bloodletting in addition to an in-depth haematological diagnosis. On the other hand, a decrease in haemoglobin concentration <12 but >9 g/dl is only an indication to start the diagnostics of the cause of anaemia. In the range 9-6 g/dl, there are already relative indications for red blood cell concentrate transfusion before starting the diagnostics of the cause, and <6 g/dl is considered an absolute indication.

In addition, the size of red blood cells, i.e. the MCV, should be looked at first [10,11]. If this is significantly lower than the norm, microcytic anaemia is present, and in Poland this is most often iron deficiency anaemia. It is most often caused by loss of iron with bleeding. In young, heavily menstruating women this is quite common and usually trivial, but in everyone else it is a sign of a very serious disease causing abnormal bleeding. This includes cancer or diseases of the gastrointestinal tract, and in women also of the reproductive tract. This should result in gastroscopy, colonoscopy, and in women, additionally gynaecological examination.

The opposite situation is macrocytosis. The most common cause is a deficiency of vitamin B12 or folic acid. The former cause requires gastroscopy, as the underlying atrophic gastritis is often a precancerous condition.

Finally, anaemia with normal-sized blood cells can be caused either by impaired production or increased destruction of blood cells (haemolytic anaemia). This is where another red cell parameter is helpful: the reticulocyte count. In anaemia with impaired production this number is reduced, and in anaemia caused by destruction of blood cells it is compensatively increased. This is usually accompanied by an increase in lactate dehydrogenase activity. Normocytic anaemia caused by a production disorder can be a symptom of myelodysplastic syndrome, bone marrow infiltration by another neoplasm (e.g. myeloma), as well as a consequence of renal failure combined with impaired erythropoietin production, or finally it can be caused by aplastic anaemia (bone marrow aplasia). Further diagnostics should be performed by a haematologist.

There is another red blood cell parameter determined by some autoanalysers, usually listed among the white blood cell parameters. It is the NRBC, which stands for *nucleated red blood cells*. Such cells should not be found in peripheral blood in a healthy person, and their presence indicates the production of cells outside the bone marrow and is usually a symptom of a rare neoplastic disease – primary myelofibrosis.

Of the platelet parameters, only the absolute platelet count is important in the initial diagnostics [12,13]. This is a strange parameter in that the limits of dangerous values are significantly different from the lower and upper limits of the norm. Exceeding the limits of the norm is therefore mainly a signal to start the investigation of the cause, and does not itself pose a direct threat. The lower limit of normal is 140-150 G/l, the first level of increased risk of bleeding is 50 G/l, and this only if accompanied by plasma or vascular abnormalities. The risk from a low platelet count alone occurs at 10-20 G/l, and this is an indication for a platelet concentrate transfusion. There is also a condition called pseudothrombocytopenia; this is ruled out by drawing blood for an anticoagulant other than EDTA, such as citrate. Conversely, while a myeloproliferative neoplasm involving platelets - essential thrombocythemia [14] – is diagnosed with a platelet count >450 G/l (after secondary thrombocythemia has been excluded), an increased risk of resulting thrombosis and bleeding exists only >1,300 G/l, and earlier mainly when other disorders that increase coagulation coexist, including disorders that stimulate platelet function. Therefore, in these situations, acetylsalicylic acid is used as the only treatment, which, without affecting platelet count, reduces the number of functionally active platelets. It should also be remembered that about 1/3 of people

with iron deficiency anaemia have secondary thrombocythaemia, which will be corrected after iron deficiency supplementation.

On the other hand, a much more serious matter is the co-occurrence of even moderate disorders involving two or three hematopoietic lines. Here the most characteristic disorders are pancytopenia (tab. 1.) and acute leukaemia (tab. 2.). Pancytopenia is the co-occurrence of neutropenia, anaemia and thrombocytopenia. If this is found in a person who has not previously been diagnosed or treated, it may suggest aplastic anaemia, myelodysplastic syndrome and acute myeloid leukaemia. About 15% of acute myeloid leukaemias do not release cells into the peripheral blood, and can only be diagnosed by a bone marrow examination. Most often, however, acute leukaemias release cells into the peripheral blood and pancytopenia or bicytopenia of healthy cells (neutrocytes, erythrocytes and thrombocytes) is associated with monocytosis, lymphocytosis or both.

Erythrocyte sedimentation rate

This is an extremely simple test, which involves placing blood taken for anticoagulant in a tube and measuring how many millimetres the red cells have dropped after one hour [15]. The rate of descent depends on how many red cells there are and the resistance to their descent by plasma proteins, especially albumin. The lower its relative concentration (in relation to globulin), the lower the resistance and the faster the descent. Delayed ESR (1-2 mm/h) is quite characteristic of a chronic myeloproliferative neoplasm such as polycythaemia vera, it is caused by a very high number of red blood cells and a very accelerated one (>100 mm/h, triple digits) for multiple myeloma, it is caused by the presence of large amounts of monoclonal immunoglobulin and a simultaneous decrease in albumin. However, this test is not used to establish the diagnosis of any disease, but only to signal its presence. An ESR >20 mm/h but <40 mm/h with no significant obvious cause, requires, first of all, a repeat of the test and continuation of the diagnostics if the result is the same or even worse. A result >40 mm/h almost always requires intensive diagnostics aimed at detecting the disease causing it, including cancer.

It should be remembered, however, that a normal ESR does not exclude neoplastic disease and does not even exclude the presence of myeloma (see below). If an accelerated ESR is found, the next test is a proteinogram, a test for the presence of monoclonal protein and (if available) a test for immunoglobulin light chains.

Table 1. Typical result of complete blood count in pancytopenia (co-occurrence of neutropenia, anaemia, and thrombocytopenia)

Tabela 1. Typowy wynik badania morfologii krwi w pancytopenii (współwystępowanie neutropenii, niedokrwistości i małopłytkowości)

parameter name	abbreviated name	value
absolute white blood cell count	WBC	2.3 G/l
absolute neutrocyte count	NE	0.83 G/l
absolute lymphocyte count	LY	0.96 G/l
absolute monocyte count	MO	0.46 G/l
absolute eosinophil count	EO	0.02 G/l
absolute basophil count	BA	0.01 G/l
absolute red blood cell count	RBC	3.23 T/l
haemoglobin	HGB	10.4 g/dl
haematocrit	HCT	31.4%
mean corpuscular volume	MCV	97.3 fL
absolute platelet count	PLT	58 G/l

Such a result in a previously untreated person may suggest aplastic anaemia, myelodysplastic syndrome or acute myeloid leukaemia. Any bicytopenia (e.g. neutropenia + anaemia) will also indicate the presence of similar conditions.

Urinalysis

From the haematologist's point of view, the most important parameter of the urinalysis is the detection of protein [16]. The detection of proteinuria should always initiate diagnostics for multiple myeloma. Approximately 15% of myelomas are known as light chain (immunoglobulin) diseases. These are diseases in which the cancerous plasma cells produce only light chains instead of the entire immunoglobulin. Such chains damage the kidneys very quickly and are excreted in the urine, in which case both the ESR and the proteinogram may be normal.

It is even worse when the light chain produced by neoplastic plasmocytes tends to change its conformation. Then, deposited in the kidneys as amyloid, it also damages them, but in a different way, and then the excreted protein is albumin. This cancer is called primary amyloidosis and is more dangerous than myeloma, because amyloid can cause similar damage in the heart, vessels and liver. The treatment of this disease (similar to myeloma) is also carried out by haematologists.

Table 2. Typical result of complete blood count in untreated acute leukemia

Tabela 2. Typowy wynik badania morfologii krwi we wcześniej nieleczzonej ostrej białaczce

parameter name	abbreviated name	value
absolute white blood cell count	WBC	28.0 G/l
absolute neutrocyte count	NE	0.8 G/l
absolute lymphocyte count	LY	15.5 G/l
absolute monocyte count	MO	9.77 G/l
absolute eosinophil count	EO	0.0 G/l
absolute basophil count	BA	0.1 G/l
absolute red blood cell count	RBC	2.62 T/l
haemoglobin	HGB	8.94 g/dl
haematocrit	HCT	27.2%
mean corpuscular volume	MCV	104.0 fL
absolute platelet count	PLT	71 G/l

It is important to note the co-occurrence of two phenomena: an increased number of monocytes or lymphocytes or both (as in this example), some of which are suspected of being abnormal cells – leukaemic blasts. The second phenomenon is the presence of one, two or three (as in this example) deficient normal cells. However, it cannot be determined from this test whether it is myeloid or lymphoblastic leukaemia.

Haematuria can be a consequence of thrombocytopenia, but if this is not present and the examination does not concern a woman at the time of her menstrual bleeding, it is necessary to start the diagnostic process for kidney or bladder cancer in the first place, and then for cervical cancer in women and prostate cancer in men.

Indications for referral to a haematologist

As a consequence of these considerations, the following indications for referral to a haematologist have been formulated [modified according to 17 literature items]:

- due to abnormalities of the absolute white blood cell count and the absolute counts of individual types of white blood cells:
 - absolute white blood cell count <2.5G/l or >20G/l (rule out infection)
 - absolute neutrocyte count <1 G/l or >20 G/l (rule out infection)
 - absolute lymphocyte count <1 G/l (rule out AIDS) or >5 G/l
 - absolute monocyte count >1.5 G/l (>1 G/l order microscopic evaluation of the smear)
 - absolute eosinophil count >1.5 G/l (rule out parasites and allergies)

- absolute basophil count >0.1 G/l
- due to red blood cell abnormalities:
 - Ht >0.56 – in all cases
 - Ht >0.53 – in a patient without chronic obstructive pulmonary disease
 - Hb <12 g/dl – except for microcytic anaemia in young women (in whom iron deficiency anaemia due to heavy menstruation should be suspected first and explained), in all others repeat the test before referring
 - Hb <9 g/dl – in all cases
 - Hb <6 g/dl – immediate referral to hospital
- due to isolated platelet count abnormalities:
 - platelet count >600 G/l – all patients
 - platelet count >450 G/l – repeat the test first and refer if confirmed or if there are any thrombotic complications
 - platelet count <140 G/l – repeat the test first (including citrated blood) and refer if confirmed, especially if additional deficiency of another cell type is found
 - platelet count <100 G/l – all patients
 - platelet count <50 G/l – referral to hospital
- due to complex abnormalities in complete blood count – all patients
- due to accelerated ESR >40 mm/min, especially in association with abnormalities in complete blood count, changes in proteinogram or proteinuria
- due to proteinuria (any), especially associated with complete blood count abnormalities, accelerated ESR and/or changes in the proteinogram

Conclusions

Nowadays, an in-depth haematological diagnosis is only possible in specialised centres. This is because even peripheral blood analysis requires access to very specialised equipment, including flow cytometry, and also because bone marrow examination often comprises five different analyses – not only classical cytological, but also histological (trephine biopsy), flow cytometry, cytogenetic biology and molecular biology [18]. In this situation, the aim of the initial diagnostic work-up of blood diseases is primarily to either confirm or deny as quickly as possible that the patient may be developing a disease that, without treatment, can rapidly lead to death, and so to refer the patient to a haematology centre. This is to enable rapid completion of the diagnostic process, establish a definitive diagnosis and initiate appropriate treatment.

Literature

1. Hayward CPM. How I investigate for bleeding disorders. *Int J Lab Hematol*, 2018; 40 (Suppl 1):6–14
2. Chabot-Richards DS, George TI. Leukocytosis. *Int J Lab Hematol*, 2014; 36: 279-288
3. Gibson C, Berliner N. How we evaluate and treat neutropenia in adults. *Blood*, 2014; 124: 1251-1258
4. Newburger PE, Dale DC. Evaluation and management of patients with isolated neutropenia. *Semin Hematol*, 2013; 50: 198-206
5. Jędrzejczak WW. Assessment of the value of prednisone test in differential diagnosis of neutropenic state. *Blut*, 1975; 31: 69-76
6. Hallek M, Shanafelt TD, Eichhorst B. Chronic lymphocytic leukaemia. *Lancet*, 2018; 391: 1524-1537
7. Obirikorang C, Quaye L, Acheampong I. Total lymphocyte count as a surrogate marker for CD4 count in resource-limited settings. *BMC Infect Dis*, 2012; 12: 128
8. El Hussein S, Khoury JD, Medeiros LJ, Loghavi S. Laboratory evaluation and pathological workup of neoplastic monocytosis – chronic myelomonocytic leukemia and beyond. *Curr Hematol Malig Rep*, 2021; 16 (3): 286-303
9. Larsen RL, Savage NM. How I investigate eosinophilia. *Int J Lab Hematol*, 2019; 41: 153-161
10. Lanier JB, Park JJ, Callahan RC. Anemia in older adults. *Am Fam Physician*, 2018; 98: 437-442
11. Powell DJ, Achebe MO. Anemia for the primary care physician. *Prim Care*, 2016; 43: 527-542
12. Lee EJ, Lee AI. Thrombocytopenia. *Prim Care*, 2016; 43 (4): 543-557
13. Stasi R. How to approach thrombocytopenia. *Hematology Am Soc Hematol Educ Program*, 2012: 191-197
14. Sacchi S, Vinci G, Gugliotta L, et al. Diagnosis of essential thrombocythemia at platelet counts between 400 and 600x10⁹/L. Gruppo Italiano Malattie Mieloproliferative Croniche(GIMMC). *Haematologica*. 2000; 85: 492-495
15. Brigden M. The erythrocyte sedimentation rate. Still a helpful test when used judiciously. *Postgrad Med*, 1998; 103: 257–262, 272–274
16. Echeverry G, Hortin GL, Rai AJ. Introduction to urinalysis: historical perspectives and clinical application. *Methods Mol Biol*, 2010; 641: 1-12
17. Jędrzejczak WW. Wczesna diagnostyka chorób krwi – wskazania do skierowania chorego do hematologa. In: Jędrzejczak WW, Robak T, Podolak-Dawidziak M, eds. *Praktyka hematologiczna [Haematology in practice]*. Termedia, Poznań 2017: 109-113
18. Haferlach T, Schmidts I. The power and potential of integrated diagnostics in acute myeloid leukaemia. *Br J Haematol*, 2020; 188 (1): 36-48

Trauma Informed Care in Medical Facilities

Terapia zorientowana na traumę w placówkach ochrony zdrowia

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Abstract The recognition of traumatic experiences across all aspects of human life has spurred the development of research on the impacts of trauma in various segments of society. The Adverse Childhood Experiences Study (ACES) first documented the correlation between exposure to childhood trauma and physical and mental health disorders in adulthood. Further studies provided additional evidence of the long lasting impacts of trauma and led to practices to decrease re-traumatizing policies and practices. Trauma informed care (TIC) offers concepts and approaches for successful engagement and effective treatment for trauma survivors. This paper presents six basic principles of TIC and the methods for their application. This study also presents the results of research on the importance of understanding an individual's conceptualisation of the trauma event. It has been suggested that the individual's unique perceptions of a traumatic experience should influence the selection of an appropriate therapeutic approach.

Key words: ACE, adverse childhood experiences, addictions, moral injury, post-traumatic stress disorder, supervision

Streszczenie Odkrycie powszechności przeżyć traumatycznych w życiu ludzi było początkiem rozwoju badań nad wpływem różnego rodzaju urazów na stan zdrowia społeczeństwa. Pierwsze badania korelacji między występowaniem doświadczeń traumatycznych w dzieciństwie (ACE) a miarą dolegliwości zdrowia fizycznego i psychicznego w późniejszym wieku wskazało na znaczenie urazów w rozwoju człowieka. Z powodu istotnego wpływu traumy na zdrowie stwierdzono, że żadna pomoc osobom, które doświadczyły urazów, nie może prowadzić do retraumatyzacji. W tym celu określono podstawowe zasady działania dowolnej placówki ochrony zdrowia zorientowanej na traumę (TIC). W pracy przedstawiono sześć podstawowych zasad TIC oraz metody ich zastosowania w celu stworzenia bezpiecznego miejsca pomocy ofiarom traumy. Oprócz specjalnych warunków, jakim powinien podlegać ośrodek TIC, w pracy przedstawiono również wyniki badań dotyczących różnych obrazów zapisu traumy w świadomości człowieka. Uznano, że odmienność zapisu powinna mieć znaczenie w wyborze odpowiednich podejść terapeutycznych.

Słowa kluczowe: doświadczenia traumatyczne w dzieciństwie, ACE, stres pourazowy, zranienie moralne, uzależnienia, superwizja

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Introduction

Traumatic experiences in the lives of patients are given special attention as experiences that require a visit to a psychiatrist or a specialised therapist. Many health professionals fear that talking about traumatic experiences may provoke emotional reactions in the patient that are difficult to control. This approach, in turn, is seen by patients as a signal that their experiences are in the embarrassing category, which they should not talk about. Since traumatic events are

often accompanied by feelings of guilt and humiliation, the reluctance of medical staff to hear stories of traumatic events reinforces the negative feelings of patients. A number of therapeutic approaches have been developed to help people who have experienced trauma to recover psychologically. These are provided by specialists in the fields of psychiatry, psychology and social work. However, the percentage of people seeking specialist help is very small. Usually, patients themselves have to recognise that their problems are related to the trauma they have experienced, and so

should seek help from a mental health professional. Unfortunately, one of the effects of trauma is the fear of reliving it. The memory of trauma is the biggest problem for people who have suffered it – they fear what could actually help them most: they avoid people and anything that might remind them of the trauma.

In 1985, Vincent Felitti of the Preventive Medicine Hospital in San Diego, California, began studying the treatment of obesity. In the course of his research, he noticed certain patterns in a group of patients who had interrupted treatment. After years of analysis and confirmation of the results obtained on a very large group (26,000 people), Felitti and his team announced two important findings: (1) the survival of a traumatic experience in childhood affects the vast majority of the population and (2) the number of traumatic experiences in childhood coincides with the incidence of self-destructive behaviour and health problems in later life. The results of these studies have led specialists to consider the experience of trauma as one of the key problems of preventive medicine, and the number of adverse childhood experiences (ACEs) as an indicator of the risk of developing somatic and psychological problems in later life.

The most important conclusion of the Felitti group's study was that trauma occurring at an early age influences a range of health problems in later life. Due to the time difference, it was difficult to capture the causal relationship between childhood trauma and adult health [1]. Two concurrent events, the decade of brain research at the end of the 20th century and the return of soldiers after the end of the Vietnam War, gave rise to intensive research on the effects of psychological trauma in humans. Discovering the prevalence of trauma in people's lives as a result of research by the Felitti group has led to increased interest in the impact of trauma on human health.

In this work we aim to show how looking at a patient's health through the lens of their trauma history changes the approach to the health care system. The necessary system change affects every health facility, from ensuring that its staff are educated in the topic of trauma to creating an environment where every patient feels safe. Therefore, we will first discuss the concept of trauma itself and its many meanings, and then present proposed changes to the medical system to serve health care well. The long-term effects of trauma affect both physical and mental health. In this work we will focus on examples relating to mental health. We will discuss trauma-informed treatment for substance abuse and behavioural addictions. Any treatment process depends on identifying the problem. In therapy, it is important to understand the picture of trauma that has formed in the patient's consciousness.

Therefore, the model described is always patient-centred.

Changes in approaches to mental disorders

The emergence of work on the significance of trauma in people's lives has changed therapists' perspectives on the traditional description of addiction and other mental disorders. Research has shown that experiencing trauma in adults is associated with a high incidence of self-destructive behaviours such as substance and behavioural addictions, self-harm and suicide. Traumatized people may develop psychiatric disorders such as anxiety, depression or post-traumatic stress disorder (PTSD). The co-occurrence of trauma and risky behaviour has led to the assumption that people who have experienced trauma try to alleviate post-traumatic symptoms by their behaviour [2,3]. From the research of the Felitti group, we know that 78% of women with 4 ACEs (four different traumatic experiences in childhood) used intravenous drugs. This is one of the most destructive methods of addiction to psychoactive substances. It was observed that women who had experienced sexual violence in their youth abused alcohol 60% more often than other women. Men who have experienced childhood trauma (especially sexual violence) are also more likely to abuse alcohol and other substances, commit violent crimes and are more likely to inject themselves with drugs. The likelihood of smoking, alcohol addiction, use of illegal substances and intravenous drugs was increased 1.8-fold, 7.2-fold, 4.5-fold and 11.1-fold, respectively, in individuals with more than 4 ACEs [1].

The prevalence of traumatic experiences in human life (>65% of the population) and the observation that victims prefer to alleviate the symptoms of these traumas on their own, have led to changes in the psychological interventions used. In recent years the sensitivity of therapists to the history of trauma in patients' lives has increased. A fundamental question has become: 'What could be the cause of the observed self-destructive behaviour?' Such a question guides the diagnostic interview and helps the health professional develop a treatment plan. It turned out that the characteristic feelings of guilt and shame among trauma victims, which often prevent patients from seeking help, could be alleviated by information that the coping methods used were the only ones the patients had available to them before seeking specialist help.

Trauma

There are many terms and definitions of trauma, ranging from those commonly known from the lists of classification of mental disorders (DSM and ICD) to the term trauma used in personal injury medicine. Of course, mental disorders must be distinguished from bodily injury, although severe physical injury is usually accompanied by psychological trauma as well. Bodily injuries are the main cause of death in the first four decades of life [4], and their most common cause is traffic accidents. In the studies by Karwan et al. [5] and Gula et al. [6] they discuss how best to organise emergency treatment of physical trauma in civilian and military hospitals. It is assumed that emergency treatment of trauma should also include planning to assist in the long-term recovery process. For this reason, social workers are also mentioned in the group of specialists from various medical disciplines. It is the social workers in veterans' hospitals (VA - the largest health care system in the USA) who are the professional group best equipped to provide medical assistance requiring the collaboration of multiple specialists [7]. In recent warfare, thanks to medical advances, many soldiers have survived serious injuries but have been left with their effects, both physical - in the form of amputations - and psychological - associated with traumatic brain injury (TBI) and PTSD. Thus the coincidence of the word 'trauma' for physical and psychological injuries is not accidental. It refers to disturbances in the function of the organism, which is composed of the brain and the body. This is particularly relevant in cases of TBI, which cause both physical and psychological disorders. Life-threatening physical injuries and the hospital stay itself can cause psychological trauma.

This is also true for children, as a hospital stay is a dramatic new situation. In addition to the stress of the medical condition, children are often isolated from their parents and subjected to new living conditions. Any stressful situation that may have already happened in their lives increases the sense of danger and may hinder the healing process [4]. Research findings on the affect of stress in children's and adults' lives on their later health have led to changes in the current system of care towards trauma-informed treatment [2]. In the traditional approach, when symptoms of experienced trauma were recognised, the patient was referred to a trauma specialist. Today, attention is paid to ensure that anyone who has experienced trauma is not retraumatised in health care settings [4]. For the past several years, more and more studies have been written to sensitise health care professionals to the importance of trauma in people's healing process [2].

The work on methods of helping trauma patients is developing in two directions: the first and most well-known is the improvement of therapeutic methods based on psychology [8], the second is related to a change in the concept of how health services work. The latter is related to a different way of organising both medical institutions and the assumptions of their work. In this approach, the goal is a hospital, clinic or mental health centre that should be prepared to work with any patient, including those who have experienced trauma. A description of the organisation of a trauma-informed medical facility based on the guidelines of the government institution SAMHSA [2] is presented in the next chapter.

Trauma-informed medical facility

The term facility should be understood as every medical unit - from the outpatient clinic to the hospital. Wherever people come for help because of a medical condition, there should be an organisational structure oriented towards trauma-informed care (TIC). Through research on ACEs, it is known that a patient's symptoms are often underpinned by the history of a traumatic event which they have experienced. This can be a childhood event, but can also be a trauma experienced in adulthood. Usually, people seek help because of health complaints or other problems in their lives, but only a specialist can recognise the presence of symptoms of the experienced trauma. Therefore, in a trauma-informed model of health care, every organisational unit should have conditions to help people who have experienced trauma.

The US Department of Health agency, SAMHSA, has prepared a detailed description of a trauma-informed health care facility. The basic assumption of this model is that traumatic experiences are a common phenomenon in people's lives. Therefore, all staff in such a facility should be trained to recognise the affect of trauma on people's health and lives. They should be able to talk to people who seek help for whatever reason, and be aware that some of the problems presented are probably related to the experienced trauma.

A basic precept of conduct is the prevention of retraumatisation. Patients in health care institutions are very often treated in a hurry, without paying attention to their emotional state, and during the diagnostic interview they are surprised by intimate questions, without any explanation as to the purpose for which they are being asked. There is not usually time for a calm conversation, through which the patient can gain confidence in the health care professional and slowly reveal the nature of his or her worries.

During a conversation in a safe environment, the trained ear of a professional can pick out signals of more serious problems that the patient does not want to talk about [2].

Six basic principles of trauma-informed care

- **Safety.** The patient should feel safe both in the room where the organisation is located, in the therapist's room and in the activity room, and when interacting with other people on the premises. It is the patient's feelings that are important, not the beliefs about safety of the organisation's staff.
- **Honesty and a sense of trust.** The patient sees and understands all the activities of the organisation, is informed about everything, and all people on the premises have the same knowledge of topics relevant to the activities of the facility.
- **Mutual support.** People who have experienced the support of the centre can participate in helping others in their process of healing from the effects of trauma.
- **Collaboration and partnership.** Everyone in the centre - patients, therapists and economic staff - has an equal share in creating an atmosphere of safety and healing.
- **Empowerment of patients.** One of the effects of trauma is the loss of a sense of empowerment. For this reason, a trauma-informed centre has the task of restoring real empowerment in the lives of the people in the centre. The patients, in cooperation with the staff of the organisation, define both their needs and the ways of fulfilling them. They make their own choices and influence their future.
- **Sensitivity to difference.** Every patient has their own cultural and social background. They may come from a poor family or one in which violence was an everyday occurrence. They may come from an immigrant family or be displaced from their environment and are lost. They may experience discrimination or social resentment, which is familiar to groups such as the homeless and racial or sexual minorities. The community of a trauma-informed centre must understand the physical and psychological conditions of such people.

All of these principles should be paramount in the design of a trauma-informed health care facility system. Ten domains of such centres are identified, and it is discussed how all six principles of a trauma-sensitive facility can be implemented in each domain.

- **Management.** The management of the centre are responsible for organising its system in accordance with the principles of a trauma-informed facility.

- **Provisions.** Every institution has provisions that regulate its functioning. It is in the institutional regulations that all the rules of the TIC organisation must be included - both for internal operation and for any collaboration with other organisations. No one can be exposed to possible retraumatisation. In this way the principles of a trauma-sensitive organisation are written into the institutional regulations and do not depend on the views of individuals.
- **Physical space.** The environment to which the patient comes should be welcoming and have a calming effect, without creating feelings of confusion or danger. Signs and leaflets with information about the place and purpose of the facility should be in plain sight so that the patient does not have to ask questions to strangers.
- **The centre's community.** People seeking help, their families and accompanying persons form a community, which is a source of mutual support, conditions should be created which are conducive to recovery.
- **Collaboration on many levels.** People who have experienced trauma may have needs in other areas of their lives: they may be looking for work or housing, they may have difficulties in their relationships with other people, or they may suffer from different mental and physical ailments. All these needs should be recognised and discussed with the patient. The organisation can offer cooperation with other organisations that specialise in services relevant to the patient.
- **Treatment.** Diagnostic and therapeutic management should be based on experimentally proven methods of treating the effects of trauma, taking into account the six principles discussed earlier.
- **Training and management of people.** From the point of employment through all levels of career, staff development takes place in parallel with training on the role of trauma in people's lives.
- **Quality management.** Organisational changes carried out to sensitise the health unit to trauma should be evaluated on an ongoing basis in order to quickly make the necessary corrections and improvements to the programme.
- **Finances.** The financial programme of the institution must include expenses related to trauma training, therapy materials and expenses to ensure the safety of the facility environment.
- **Systematic evaluation.** Checking that the application of the principles of the TIC organisation in all domains of the institution's operation is done in accordance with the best experience in the field.

Procedures for working with clients are also presented. The main assumption is the equal status of client and therapist. Situations where there is an all-knowing therapist and a subordinated client are avoided. The various activities typical of therapeutic work in a TIC organisation are listed below.

- At the beginning of the acquaintance, the therapist will explain what he or she will be doing during the meetings with the patient. He/she will explain his/her tasks related to the diagnostic interview, the treatment plan and further cooperation.
- He/she will explain the results of the diagnostic interview, especially in the part about the traumatic experience.
- He/she will talk about the biological mechanisms of stress, the effects of trauma on the nervous system, and give a description of the symptoms of post-traumatic stress.
- He/she will emphasise the importance of the client's safety conditions and the rules of contact with the therapist or other people to whom the client can turn in crisis situations.
- Instead of 'I know better', the therapist will emphasise that all actions and decisions will be discussed and made together.
- He/she will explain why all suggested activities can help the client in recovery.
- He/she will highlight the client's achievements in developing new skills and demonstrated coping abilities.
- He/she works with the client to identify situations that may trigger crisis reactions and considers how the client can address them.

In each situation it is the client who decides about their life and what is important to them. The therapist cooperates with the client. A treatment plan is discussed together in accordance with the therapist's knowledge and the client's wishes.

The need for trauma-informed institutions

If we understand how strongly people's lives are affected by the trauma they have experienced and how little we know about what people experienced in childhood, then we can realise that institutions dealing with social care, education, health or justice for both juveniles and adults very often deal with victims of trauma. Based on the recent accumulated knowledge about the affect of trauma on lives, we can conclude that each of the institutions mentioned here should work according to a trauma-informed approach [9]. A growing body of research points to the need for a variety of trauma-sensitised institutions. For example, Regal et al. [10] indicated that women who have

experienced sexual violence in childhood are highly reluctant to undergo preventive medical examinations. This patient group is more likely to develop breast cancer and ovarian cancer, as women avoid examinations in which they have to undress and may be touched during diagnostic tests. Overall, women who have experienced childhood abuse have a much poorer prognosis for cancer. The authors demonstrate that both ACEs determination and trauma-focused medical care can produce better outcomes for this group of patients [10]. Traumatic experience can happen at any age, including the period just after birth or even before birth. Newborn children, who for various reasons have to stay in an intensive care unit without parental care, are deprived of the common early feelings and experiences that form the bond with the mother. Also the experience of heightened emotions by the pregnant woman can affect the biology of the child's stress response. Sensitising health care professionals to trauma will help draw attention to patient safety and advance research on ensuring children's resilience to stress [11].

The relationship between trauma and addiction has long been known. But it is only the creation of integrated programmes for people suffering from dual diagnosis that has facilitated the emergence of treatment where the history of trauma experienced and addiction can be addressed at the same time. Addiction treatment is a good example of both a trauma-informed care model and the use of specific techniques to treat the effects of trauma [12].

Addressing trauma in addiction treatment programmes

Addiction therapists are usually reluctant to deal with the subject of trauma in their clients' lives, as they know from experience that evoking strong emotions can lead to relapse. Some believe that the history of trauma is sometimes misused by patients, and is an excuse to stop treatment. Therefore, those who specialise in addiction treatment not only show a lack of interest in trauma, but even refuse to include trauma history in the treatment process. There are beliefs that help to preserve this tradition. For example, it is believed that any co-occurring mental health issues should only be addressed once the patient has achieved and maintained sobriety. Significant reasons are given as to why this approach is considered appropriate. For example, many of the effects of psychoactive substances are known to produce symptoms similar to those of mental disorders, such as depression, anxiety and mania. In order to properly assess the symptoms observed, it is essential to stop

using addictive substances. Unfortunately, this approach eliminates all individuals who are unable to engage in therapy without chemical control of their emotions. People who suffer from depression or other mental disorders often avoid specialist help because of the stigma attached to visiting a psychiatrist. Left on their own, they prefer to use legal and illegal psychoactive substances to improve their mood. There is also a group of people who use various behaviours (e.g. shopping or gambling) to improve their mental state, which, after prolonged use, can lead to behavioural addictions. The proposal to treat addiction without treating the symptoms of depression or other mental disorders is unacceptable to these patients. For example, a patient who has symptoms of PTSD will not go to an Alcoholics Anonymous meeting or a therapy group where they know no one and find themselves in an absolutely unfamiliar environment. For them, such 'treatment' is torture. The experiences and confessions of patients regarding the treatment of symptoms of depression, anxiety and post-traumatic stress have led to the development of integrated programmes. In the treatment process according to this model, the patient learns to cope with both addictions and symptoms of mental health problems at the same time. It is true that maintaining sobriety in this mode is difficult, and that is why many integrated programmes benefit from the achievements of the harm reduction model. Rather than requiring immediate sobriety, they prepare the patient to understand their situation and work together to develop the best approach to improving their quality of life.

Difference between treatment system and therapeutic techniques

As mentioned above, trauma-oriented addiction treatment can and should use the concept of an integrated model. In this case a clear distinction should be made between specialised trauma-focused therapeutic techniques and the treatment system, i.e. the organisation of the centre where addiction treatment is provided. There are different groups of patients who require profiled health care. A great deal of research on specialised TIC has been devoted to women and military veterans. In addition to these groups there is research on social minorities who experience stress related to their characteristics (minority stress), such as the LGBTQ community or racial minorities [13]. Each patient group may require both a specialist facility (e.g. a women's clinic or a military hospital) and specialist therapeutic approaches. We explain the differences below.

Organisation of a trauma-informed centre

In addition to the principles described earlier, the therapeutic facility should collaborate with other centres that specialise in helping a particular population group; the specialised help may be different for women (childcare, women's health) and veterans (military health service – VA), but may also be the same (help with finding work or housing). Women may also be military veterans, which increases the requirement for specialised help (e.g. the effects of sexual violence in the military). Addiction treatment centres need to have specialisation due to their location and the characteristics of the patient group they offer their services to. A programme for victims of domestic violence will work differently from a programme for men with a diagnosis of PTSD who are in prison [14].

Trauma-focused therapeutic models and techniques

The first and essential intervention is psycho-education. It is assumed that the patient should know and understand the nature of their problems – how they arise, how they reinforce each other and how they can be addressed. Members of different social groups (e.g. men and women) may have their own specific experiences. Each patient should be aware of their emotions and how to control them. Patients learn to recognise when they are dealing with a memory of trauma, when they feel threatened in the present, and when they are experiencing drug cravings. Patients learn healthy eating, sleep hygiene and body fitness. Many learn the principles of mindfulness and develop connections with fellow patients in recovery. Using motivational interviewing techniques, the therapist helps them to engage in the next steps of their treatment. They participate in group or individual therapy activities. One of the more interesting therapeutic approaches is Seeking Safety, a group therapy programme using a workbook. Each class has written exercise and discussion topics on addiction and trauma [14]. Seeking Safety improves patients' quality of life, although it is not a treatment for trauma. Other therapeutic techniques and models are used to treat trauma, such as various forms of cognitive behavioural therapy (CBT), eye movement desensitisation and reprocessing (EMDR), prolonged exposure therapy, and models such as dialectical behavioural therapy (DBT) and acceptance and commitment therapy (ACT) [2,8,14].

Other trauma

It has long been known that there are different traumas, and for this reason the scientific and therapeutic communities use different classifications of trauma [3,8]. The most common is trauma caused by natural forces (e.g. flood or earthquake) or due to human actions (traffic accidents, violence or warfare). Some refer to trauma with a capital 'T' or a small 't'. However, it is important to remember that the same event can trigger different reactions in different people. People are most strongly affected by events that shatter their identity and their belief in a safe and just world. The affect of trauma on the psyche and body of a trauma victim can be very strong, and may require the cooperation of specialists from many fields to fully understand the extent of the damage caused by the trauma.

It appears that therapies with proven efficacy in treating trauma may be rejected by some patients as too invasive. For example, many military veterans refuse to participate in exposure therapies. Such a reaction from patients came as a surprise to staff at veterans' hospitals, as these methods were considered the best. Upon closer examination of the history of traumatic experiences, it was found that the devastating affect of trauma can involve different experiences and emotions, and thus trauma can be recorded differently in a person's consciousness. In the case of the veterans for whom exposure therapy brought marked improvement, their trauma was related to the experience of high threat and paralysing fear. During therapeutic activities, patients adapt to the image that caused their fear under conditions of safety. In the case of the veterans who refused to participate in exposure therapy, the trauma involved experiencing an event that destroyed their identity. An example of such trauma might be the discovery that soldiers had contributed to the deaths of vulnerable women and children instead of fighting for great ideals. The experience, in which the patient felt betrayed and deprived of faith in the righteousness of his fight, was called moral injury [15].

It can be easily understood that in the two cases mentioned, the therapy of trauma should be completely different. In the first case, the therapeutic intervention is the habituation to the frightening situation, and in the second case, the relief of feeling guilty for the suffering of others can be brought by discussing the personal role in the event. The more we know about the background of the illness, the better results we can achieve in its treatment. Through research into the effectiveness of TIC programmes, we know that addiction treatment without trauma

sensitisation can be at least inadequate for most patients, and for some – when retraumatisation occurs – can be downright harmful. Similarly, when we do not understand where the observed symptoms are coming from, we may offer treatment that proves inappropriate. Therefore, a negative treatment outcome should be considered as a probable diagnostic error and not as the patient's 'resistance' to therapy. The lack of positive treatment outcomes may reinforce the patient's feeling that this is their fate, that the world is unfair and nothing will help them any more. Such a reaction has been called embitterment, and has been described as a specific response to trauma other than PTSD [16]. It is easy to imagine that, in this case too, the therapeutic approach should be tailored to the recording of the trauma in the patient's mind. Embitterment arises when there is a belief in the patient's consciousness that an injustice has been done to them.

When treating trauma, it is important to remember vicarious trauma. Anyone who listens to the trauma stories of their patients may themselves experience vicarious trauma, with a set of symptoms characteristic of post-traumatic stress disorder. It is therefore an important task for the therapist to ensure a healthy and calm lifestyle and to develop resilience to trauma. Research on trauma has drawn attention to intergenerational trauma. It has been shown that victims of trauma can pass on trauma symptoms to subsequent generations. The conditions under which the effects of trauma are transmitted have been studied. It has been shown that deficits in trauma treatment or poor treatment leads to the appearance of trauma symptoms in the next generation. Only the development of trauma resilience can inhibit the transmission of trauma effects to the next generation [16].

Supervision

Since 2001, the first mention of trauma-informed treatment, there have been many articles, studies and specialist papers aimed at facilitating the introduction of this model into health care practice. As with any new approach there are also voices warning against hasty use of the term TIC. It is stressed that it is paramount that staff are properly prepared to use this approach. Any person employed in a TIC program should be aware of the prevalence of trauma in people's lives. He/she needs to be trained in communicating with clients who come to the facility seeking help. There is always a concern that a new approach will be integrated into an earlier system without significant systemic change.

In the case of mental health treatment, supervision is considered the best form of programme change towards trauma sensitisation [17]. Every professional educator should be a specialist in both supervision and trauma-informed therapy. Through systemic changes in the supervisor-supervisee relationship, the therapist-client relationship can be altered and the structure of the organisation can slowly change towards a trauma orientation.

However, there is a difficulty associated with this concept. The supervisor has three basic roles: administrative, educational and supportive. Within each of these roles there is a hierarchy of functions, it is how this relationship looks in practice that reflects the degree to which the principles of TIC are applied. Among the basic principles of TIC are collaboration and partnership, sincerity and empowerment. It is difficult to talk about these values in a hierarchical system, and without them the TIC principles cannot be maintained. In administrative supervision the teacher is usually a superior, whose task is not only to train the subordinate, but also to evaluate his/her work, which has a great influence on his/her career. In such a situation it is difficult to maintain a partnership. The supervisor will probably want to show his/her best side and will not talk about his/her insecurities or doubtful situations with the client. In the teacher-student relationship, balancing the hierarchy is also difficult because the supervisor is usually someone with longer professional practice and more knowledge of the supervisee's professional tasks.

To preserve the principles of the TIC organisation, the relationship should be based on mutual trust. The person in supervision should be aware of their own empowerment and be able to make their own choices. The support function seems to be the easiest in building a partnership. It concerns observing the supervisor's emotional reactions in his/her work with the client and his/her functioning as a professional. The reflective nature of supervision can facilitate mutual exchange of information.

It is often recommended that in a TIC organisation administrative supervision should not be linked to educational or supportive supervision. If this is not possible, it can be limited to discussing the principles of the organisation and assessing how the supervisor functions within the structure of the organisation. The supervisor can identify tasks to be performed and discuss their implementation in the learning process. In the educational role, the supervisor explains the principles of TIC, discusses the characteristics of the patients that the organisation deals with, and explains the theoretical and practical assumptions of the relevant therapeutic approaches. In the supportive

role, the supervisor may act as a therapist and discuss with the supervisee his/her reactions in working with the patient. In this case, however, it is important to bear in mind the different nature of the therapeutic and supervision relationship. In therapy the goal is to improve mental health, whereas in supervision the goal is to check that mental health is maintained and that the supervisor is properly performing his or her function as a therapist.

As mentioned earlier, vicarious traumatisation is a common problem in TIC centres, it may be the role of the supervisor to spot symptoms of this in therapists. It is important for the facility team to be able to ensure the resilience of their staff to trauma and to recognise the symptoms of vicarious trauma. A trauma-informed therapy programme has a specific structure for discussing clinical cases in supervision. Each case is analysed by discussing the six TIC principles in the life and treatment of the patient. In this way TIC principles are embedded in the culture of the centre. This is reflected in the staff's attitude towards those within the facility, whether they are patients, therapists, supervisors or maintenance staff.

Changes in the environment

The last three decades have seen not only an expansion of research into the effectiveness of different therapeutic approaches in recovery, but also many important changes in the environment in which we live. Research into the affect of traumatic events on physical and mental health has opened up new demands for an holistic treatment of the human body with its unity of the brain-body complex. More and more attention is being paid to the experiences of the body, as it is there, in addition to the brain, that trauma-induced feelings are programmed. Behavioural-cognitive therapy may not be sufficient when it is not the mind that listens, but the body that reacts. Better knowledge of the effects of trauma is leading to the development of new therapeutic approaches, especially body-oriented techniques [18].

There are global changes affecting the environment in which we live. The problems of immigration and migration of people, caused by both warfare and climate change, are beginning to be felt in the immediate environment. In 2020 the world was gripped by the COVID-19 pandemic, which completely changed our lives. In the tragic moments of the pandemic, doctors had to decide which of their patients was most deserving of help. Not everyone in need could get a life-saving ventilator. Decisions about who to save and who not to save could cause moral trauma and change people's lives for years to come [19]. The

long-standing effects of oppression, racism and discrimination against entire groups in society also cause trauma. The intergenerational memory of trauma is perpetuated and understanding of the cause of ill health and poorer functioning of whole social groups is faded. Despite awareness of the effects of stress experienced by racial and sexual minorities, both are the norm in 2021. One of the best techniques for dealing with the effects of trauma is for trauma survivors to join the fight for equal rights for all and for known forms of violence and abuse to be exposed and stopped [20]. It is hard not to see that our environment increasingly demands the use of the six principles of trauma-informed organising.

Conclusions

The development of trauma expertise over the past three decades has been significant. Just as the way of rescuing the polytraumatic patient is changing with technology, so knowledge about how the brain works is influencing the development of trauma-informed psychotherapy techniques. The same patient whose life was saved in the polytrauma unit may suffer long-term psychological effects of post-traumatic stress. The prevalence of traumatic experiences has led not only to the development of methods of treating the effects of trauma, but also to a change in the health care system in which such methods are applied. We do not know whether a patient who suffers from muscular pains should be examined by a general practitioner, a neurologist or a psychiatrist. Therefore, every patient should be treated in such a way that, in the event of a traumatic event, they are not retraumatised in a health care facility.

The possibility of experiencing a traumatic event has been increasing significantly in recent years. But the possibility of providing the best treatment conditions to a patient who suffers from trauma also increases. This paper details the trauma-informed treatment approach and why every health care facility should use it. The cited literature provides more arguments for the development of the discussed medical model.

Literature

1. Anda RF, Felitti VJ, Bremner JD, et al. The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *Eur Arch Psychiatry Clin Neurosci*, 2006; 256 (3): 174-186
2. Substance Abuse and Mental Health Services Administration. SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014
3. Cichoński Ł, Wieczorek A, Hat M, et al. Trauma a zdrowie psychiczne – Antoni Kępiński In Memoriam. *Zeszyty Pracy Socjalnej*, 2018; 23 (4): 299-311
4. Gillen T. Trauma informed care in a modern hospital setting. *Nursing Rev*, 2020; May 5
5. Karwan K, Michalak G, Gałązkowski R. Organizacja ratunkowego leczenia chorych po urazach z mnogimi i wielonarządowymi obrażeniami ciała w warunkach szpitalnych. *OPM*, 2013; 12: 28-31
6. Guła P, Brzozowski R, Wiśniewski T. Analiza doświadczeń Polskiego Szpitala Polowego w Afganistanie a przygotowanie SOR na wypadek masowego napływu poszkodowanych. *Lek Wojsk [Mil. Phys.]*, 2013; 92 (3): 283-287
7. Romaniuk JR, Esmurdoc FC. The role of Social Work in Health Care for Veterans in the United States of America *Lek Wojsk [Mil. Phys.]*, 2020; 98 (3): 199-205
8. Popiel A. Zorientowana na traumę psychoterapia poznawczo-behavioralna zaburzeń stresowych pourazowych. *Psychiatria*, 2009; 6 (4): 124-133
9. Ko SJ, Ford JD, Kassam-Adams N, et al. Creating trauma-informed systems: Child welfare, education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice*, 2008; 39 (4): 396-404
10. Regal RA, Wheeler NJ, Daire AP, Spears N. Childhood sexual abuse survivors undergoing cancer treatment: A case for trauma-informed integrated care. *J Mental Health Counselling*, 2020; 42 (1): 15-31
11. Sanders M, Hall S. Trauma-informed care in the newborn intensive care unit: Promoting safety, security and connectedness. *J Perinatol*, 2018; 38: 3-10
12. Romaniuk JR, Farkas KJ. Współczesne wyzwania pracy socjalnej w Ohio, USA. *Praca Socjalna*, 2019; 34: 5-26
13. Romaniuk JR, Kotlarska-Michalska A, Farkas KJ. American perspectives on suicidality among men in Poland. *Soc Register*, 2021; 5 (1): 45-72
14. Wolff N, Huening J, Shi J, et al. Implementation and effectiveness of integrated trauma and addiction treatment for incarcerated men. *J Anxiety Disord*, 2015; 30: 66-80
15. Barth TM, Lord CG, Thakkar VJ, Brock RN. Effects of Resilience Strength Training on constructs associated with Moral Injury among veterans. *J Veterans Stud*, 2020; 6 (2): 101-113
16. Lehrner A, Yehuda R. Trauma across generations and paths to adaptation and resilience. *Psychological Trauma: Theory, Research, Practice, and Policy*, 2018; 10 (1): 22
17. Jones CT, Branco SF. Trauma-informed supervision: Clinical supervision of substance use disorder counsellors. *J Add Offender Counselling Issues*, 2020; 41: 2-17
18. Grabbe, Miller-Karas E. The Trauma Resiliency Model: A "Bottom-Up" intervention for trauma psychotherapy. *J Am Psych Nurses Assoc*, 2018; 24 (1): 76-84
19. Masiero M, Mazzocco K, Harnois C, et al. From individual to social trauma: Sources of everyday trauma in Italy, The US and UK during the Covid-19 Pandemic. *J Trauma Dissociation*, 2020; 21 (5): 513-519
20. Strauss Swanson C, Szymanski DM. From pain to power: An exploration of activism, the #MeToo movement, and healing from sexual assault trauma. *J Counsel Psychol*, 2020; 67 (6): 653-668

Lt. COL Konstanty Świder MD, PhD (1908-1965), dedicated psychiatrist of the Polish Armed Forces in the West

Podpułkownik doktor medycyny Konstanty Świder (1908-1965),
zasłużony psychiatra Polskich Sił Zbrojnych na Zachodzie

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Abstract This is the first of three papers published in this issue of *Lekarz Wojskowy* (Military Physician) magazine dedicated to an outstanding military physician, Lt. Col. Konstanty Świder MD, PhD, forgotten in Poland. The paper presents his lineage, school years and studies at the Faculty of Medicine of the University of Warsaw, and at the Medical Cadets School in Warsaw. Also described in this paper are the beginning of Świder's career as a professional military physician in Poland, his fate after the outbreak of the WWII in September 1939, time he spent in Soviet captivity, his military service in Anders' Army in the Soviet Union, service in the Middle East, service during the Italian Campaign, and his contribution to building a psychiatric support system for soldiers of the Polish Armed Forces in the West. The last part of the paper describes the course of Dr. Konstanty Świder's professional stabilisation as an immigrant in the USA and his activity in the Polish diaspora in Chicago up to his premature death in 1965.

Moreover, examples of Dr. Świder's literary work and information on the status and professional activity of his children in the USA are presented.

Key words: history of healthcare service of the Polish Armed Forces, military psychiatry in Poland, Polish diaspora in Chicago

Streszczenie Praca jest pierwszą z trzech publikowanych w tym zeszycie „Lekarza Wojskowego” prac poświęconych osobie zapomnianego w Polsce zasłużonego psychiatry wojskowego, ppłk. dr. med. Konstantego Świdra. Przedstawiono w niej jego rodowód, przebieg nauki szkolnej oraz studiów na Wydziale Lekarskim Uniwersytetu Warszawskiego i w Szkole Podchorążych Sanitarnych w Warszawie. Opisano początki jego kariery zawodowego lekarza wojskowego w Polsce oraz losy po wybuchu wojny we wrześniu 1939 r. - pobyt w sowieckiej niewoli, służbę w Armii Andersa w ZSRR, na Środkowym Wschodzie i w kampanii włoskiej, oraz rolę w organizacji pomocy psychiatrycznej dla żołnierzy Polskich Sił Zbrojnych na Zachodzie. W ostatniej części artykułu przedstawiono przebieg jego stabilizacji zawodowej na emigracji w USA oraz działalność w środowisku polonijnym Chicago do czasu przedwczesnej śmierci w 1965 r. W pracy przytoczono również przykłady literackiej twórczości doktora Konstantego Świdra oraz informacje na temat statusu i aktywności zawodowej jego dzieci w Stanach Zjednoczonych.

Słowa kluczowe: historia służby zdrowia WP, psychiatria wojskowa w Polsce, Polacy w Chicago

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It would be pointless to look for Dr. Konstanty Świder's name in lexicons and biographical dictionaries. A distinguished military physician, participant in the battles for Monte Cassino, Ancona and Bologna, and organiser of psychiatric assistance for soldiers of the Polish II Corps, he remained abroad after the war and

was unknown in Poland. The jubilee of the 100th anniversary of psychiatry in the Polish Army (1920-2020) creates an opportunity to recall the figure of Dr. Konstanty Świder in his home country and describe his achievements in the field of military psychiatry.

As Dr. Maria Świdrowa beautifully wrote in her husband's biography [1], Kostek was born on 17 February 1908 in the small village of Czernichów, near Cracow, as the fifth child of Franciszek Świder and his wife Franciszka née Kowalczyk, whose first two sons had died. The Świdors spoke in a dialect, but were intelligent and ambitious people. The father of the family, who farmed 17 acres, was also a skilled carpenter, builder and wood carver. After Poland regained independence, it was revealed that on his way to Cracow from Czernichów, which lay on the border of the partitions, he smuggled conspiratorial prints in the furniture and coffins he made for sale.

Little Kostek seemed very talented to his parents. When he started school, the teacher confirmed it. He persuaded the parents to send him to a secondary school in Cracow. The parents paid for private lessons to prepare him for the entrance exam. Kostek passed the exam, and on September 1st 1919, began his studies at the renowned St. Anne's Gymnasium, founded in the times of the First Republic of Poland by Bartłomiej Nowodworski. Among those who studied there were the future King Jan III Sobieski, Jan Matejko, Stanisław Wyspiański and many other eminent Poles.

During the first school year Kostek's father suddenly died. The family lost its income, coming from crafts rather than from the farm, but the mother did not take her son home. She paid for his stay in Cracow with great difficulty. When, at the age of 14, he was thrown out of his hostel at the end of the school year because of overdue payments, he did not stop studying. He took his books, and for about six weeks he stayed overnight in an abandoned concrete pipe on the bank of the Vistula River. He obtained a promotion and returned home on foot. During the following school year, he somehow managed to make a living from tutoring. He was later joined by his younger sister Aniela, who started attending a secondary trade school [1].

On 27/05/1927 Konstanty Świder passed his maturity exam of the old classical type (including 7 years of Latin, 4 years of Greek, plus German) with very good marks on his certificate. Despite being encouraged to pursue civilian studies and the assistance declared by the Polish senator Edward Kleszczyński [2] for his father's underground activity, he chose a career as a professional military doctor. After passing the entrance exams and being declared fit for service in the regular army by the Conscript Commission (cat. A with paragraph 43 – functional heart disorder in a minor degree) [3], on 01/08/1927 he was admitted to the Officer Sanitary School, renamed in 1928 into the Medical Cadets School (SPS) and in



Figure 1. Lt. Konstanty Świder, 1935 [9]

Rycina 1. Por. Konstanty Świder, 1935 [9]

1930 into the Centre of Sanitary Training (CWSan.) in Warsaw [4].

The six-year education included military and military-medical (sanitary) studies at the SPS and studies at the Faculty of Medicine of the University of Warsaw (WL UW). After six weeks of recruit training Konstanty Świder was appointed a senior private officer cadet. During the next years of his studies he was promoted to the subsequent non-commissioned officer ranks, up to the rank of sergeant cadet. On 27/05/1933, after passing the final exams, sergeant cadet Konstanty Świder received a doctor's diploma and on 15/08/1933 he was appointed Second Lieutenant of Healthcare. He then completed his compulsory one-year postgraduate internship at the CWSan School Hospital in the wards of internal medicine, gynaecology, laryngology and neurology. Due to his good command of German and French (4-year course at the Alliance Francaise), he acted as an accompanying officer to foreign delegates [4-6].



Figure 2. Cover of the Podchorążcy Służby Zdrowia (Healthcare Cadet) magazine, 1931, No. 4 [10]

Rycina 2. Okładka czasopisma „Podchorążcy Służby Zdrowia” 1931, nr 4 [10]

After the completion of his internship, on 01/09/1934 the Commandant of the Hospital, Colonel Jan Garbowski [7], and the Commander of the CWSan, Brigadier General Jan Kołtąj-Srzędnicki [8], issued the following opinion about Lt. Konstanty Świder: ‘Quiet, gentle, modest and very emotional. At work he was persistent and conscientious. Very loyal to his soldiers. He works selflessly for society. Healthy and resistant. Does not have any addictions. Capable and intelligent. Has literary talent. Excellent memory. Military and professional education - very good. Clearly marked organisational abilities. In work systematic and exact. In relation to his subordinates he is tactful and just. Suitable for the position of the junior regimental physician’ (Fig. 1) [4]. Konstanty Świder’s literary talent was evidenced by his poetic output in the notebooks of the school magazine ‘Podchorążcy Służby Zdrowia’ (‘Healthcare Cadet’), published as a quarterly by the SPS Literary Circle under the supervision of Capt. Wilhelm Borkowski (Fig. 2.-3.) [5,10]. He was also

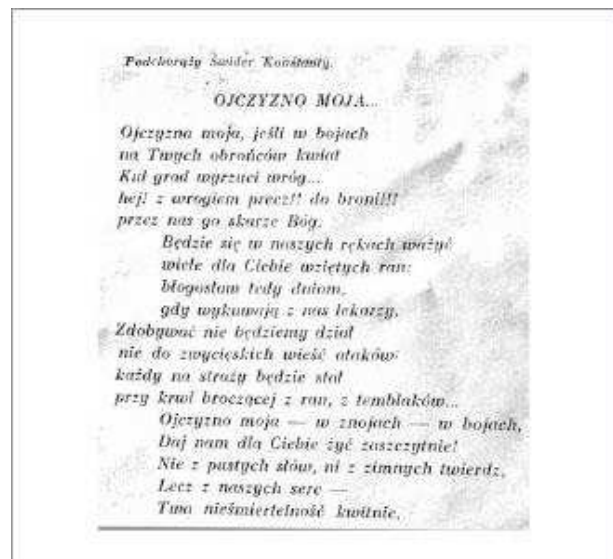


Figure 3. Konstanty Świder's poem 'My Fatherland...', 1931 [10]

Rycina 3. Wiersz Konstantego Świdra „Ojczyzno moja...”, 1931 [10]



Figure 4. Cadet Konstanty Świder and Stefan Wesołowski (upper right) at a dinner after the Christmas Pageant at the Medical Students' Club, 1933 [11]

Figure 4. Pchor. Konstanty Świder i Stefan Wesołowski (w górnym prawym rogu) na kolacji po Szopce Noworocznej w Domu Medyka, 1933 [11]

involved as a lyricist in the cabaret programmes of the House of the Medic, organised by Stefan Wesołowski, a student of the Faculty of Medicine of the University of Warsaw, who was later a prominent professor-urologist (Fig. 4) [11,12].

After graduation Konstanty Świder was promoted to the rank of lieutenant, and was then appointed to the post of junior physician of the 36th Infantry Regiment of the Academic Legion in Warsaw. In the ‘Annual qualification list for the year 1935’, his superiors – Colonel Zygmunt Csadek [13], Gen. Władysław Bończa-Uzdowski [14] and Col. Jerzy Nadolski [15] –



Figure 5. Lt. Konstanty Świder's Doctoral Diploma (PhD), May 25, 1937 [4]
 Rycina 5. Dyplom doktora medycyny por. lek. Konstantego Świdra, 25.05.1937 r. [4]

assessed him as follows: 'Extremely conscientious, dutiful, careful and diligent, with high personal values. Capable and hardworking. After completing his university studies, he specializes in neurology and is expected to obtain his doctorate in a short time. Great military knowledge. Since May this year he has been working in the regiment on his own, fulfilling his duties very well. In his spare time he personally works in the neurological clinic of UW, apart from that he works a lot by himself, studying professional medical and military works. He is entirely suitable for the position he occupies, and may also take up an independent post' [4]. Lt. Świder was similarly assessed in 1936, when he was transferred to the post of physician in the Military Investigation Prison No. 1 in Warsaw [4].

On 30/12/1936 Lt. Konstanty Świder, age 28, was married to Maria Józefa Baranowska, age 23, a student of the Medical University of Warsaw, who came from a well-known professorial family [16].

Konstanty Świder was one of the first graduates of the Medical University of Warsaw who – as a result of abolition of the professional title of 'Doctor of All

Medical Sciences' in 1932 - received a 'doctor's diploma'. He then completed the required clinical practice and wrote a dissertation under the supervision of prof. Kazimierz Orzechowski. On the basis of this dissertation the Council of the Faculty of Medicine of the University of Warsaw awarded him the academic degree of 'Doctor of Medicine' on 11/05/1937 (Fig. 5) [17,18]. On 16/10/1937, at the VII Congress of former SPS graduates, he gave a lecture "On fighting alcoholism in the army", which provoked a lively discussion among the listeners [5]. After completing his internship in psychiatry, on 29/11/1937, he was promoted to the rank of captain and appointed an assistant of the neurological office of the Air Force Medical Research Institute in Warsaw [4,19]. As Dr. Maria Świdrowa writes in the biography of her husband quoted above: 'At that time group trips abroad, which were relatively inexpensive, began to be organized. But my husband never left the country. A trip to Rome was advertised with the possibility of seeing the Pope. Kostek suddenly wanted to take part in such a trip and take his mother with him, who also never went far

outside the village. (...) It was a kind of reparation for her efforts to educate her son. However, the splendour of the Roman churches did not impress her. She said that it was better for her to pray in a very old country church in the village of Igołomia(...).

At night on the sixth day of September 1939 Kostek got an order to leave Warsaw with his family. We had a few hours to pack our things. (...) For about two days we travelled with our one year old daughter, and thankfully Kostek's sister to Lviv on a loaded train. Luckily we weren't bombed. In Lviv we got a room as quarters and luckily too, because it was near the flat of Dr. Starkiewicz [20], Kostek's friend. His wife was there, also a doctor [21], and her sister and mother who came from Warsaw, which was a help to me. Kostek was immediately ordered to leave Lviv for Kolomyia, where they were to develop a field hospital. Unfortunately, before this could happen, the whole group was surrounded by Soviet troops and arrested.

Again, luckily, because of the confusion in the Soviet army, they were released very quickly. At that time the Ukrainians were already throwing themselves at the uniformed Poles. Kostek, immediately after his release, ran to the shop of a Jewish tailor and gave him his uniform, and in return got civilian clothes and got on a train to Lviv as fast as he could. When he arrived in Lviv, the Soviets were already there. There was no accommodation then and we stayed at Mrs. Starkiewicz's house. Kostek didn't want to go back to Warsaw. He met a lot of friends in Lviv and thought that since part of the army had managed to leave for Hungary and Romania, he had to get through. He left us in Lviv and tried to cross to Hungary. Unfortunately, on the border he was caught by some Soviet patrol. It was 29th November 1939.' [1].

The further wartime fate of Dr. Konstanty Świder and his wife Maria is described by their son Christopher Świder in this issue of 'Military Physician' [22,23]. A succinct supplement to this description is the information contained in Dr. Świder's list of addresses of 'places of residence', including: prison in Stryj 11/1939 - 03/1940, prison in Kharkiv 03/1940 - 08/1940, prison in Starobielsk 08/1940 - 12/1940, forced labour camp Ucht-Izym-Lag, Komi Republic 01/1941- 09/1941, Polish Army in the USSR: Tockoye 09/1941 - 01/1942, Margelan 01/1942 - 03/1942, Polish Army under British Command - Iran, Iraq, Palestine, Egypt and Italy 31/03/1942 - 31/10/1946 (...) [9].

During the Italian campaign, from 10 July 1943 to mid August 1944, Capt. Konstanty Świder was the Deputy Chief of Healthcare of the 5th Kresy Infantry Division, he also took an active part in the Battle of Monte Cassino. From the middle of August 1944, he



Figure 6. Cpt. Konstanty Świder in Italy, 1945 [9]
Rycina 6. Kpt. Konstanty Świder we Włoszech, 1945 r. [9]

was the commander of the 5th Sanitary Company [24,25]. On May 15, 1945 he was appointed a psychiatrist of the Polish II Corps and promoted to the rank of major (Fig. 6.). In this function, he developed and implemented a programme of preventive treatment of the most common mental disorders among soldiers. He organised the Centre for the Exhausted in Loreto, which was intended for the treatment of transient mental disorders related to war stress. He presented his experiences from the implementation of this programme on 19 December 1945 in a paper at the Congress of Polish Military Physicians in Bologna, a copy of which is published in this issue of 'Military Physician'. [26,27].

For his services in the Italian campaign, Major Świder was awarded the Cross of Valour (three times). He was also awarded the Monte Cassino Cross (No 148 170), the Gold Cross of Merit, British medals: 1939 - 1945 Star, The Defence Medal, The Italy Star, The King George VI Medal, Vatican Order of Pope Leo XIII *Pro Ecclesia et Pontifice* and others [9].



Figure 7. Maj. Konstanty Świder, Head of the Psychiatric Department of Polish Hospital 4 in Iscoyd Park, 1947 [9]

Rycina 7. Mjr Konstanty Świder jako ordynator oddziału psychiatrycznego Polskiego Szpitala Nr 4 w Iscoyd Park, 1947 r. [9]



Figure 8. The view of the barracks of Polish Hospital No. 4 in Iscoyd Park, Shropshire, England [29]

Rycina 8. Widok baraków Polskiego Szpitala Nr 4 w Iscoyd Park, Shropshire, Anglia [29]

After evacuation to Great Britain in November 1946, Major Świder headed the psychiatric ward in Polish Hospital No. 4 in Iscoyd Park, Shropshire, England, for soldiers and veterans from all formations of the Polish Armed Forces in the West (Fig. 7.-8.) [28,29].

The liquidation of this ward and the dispersal of patients to various English psychiatric hospitals was a blow to him. He was also very much affected by his discharge from the army on 13/05/1949. As a result of these events, Dr. Świder moved to Manchester together with his family, extended by his son Bogdan, born in Penley in 1947. He worked there for almost 2 years as head of the male psychiatric ward at Springfield Hospital [9].

Dr. Świder believed that the British authorities had an unfavourable attitude to the 'Polish question'. This, coupled with news he received from his family about the Sovietization of Poland, persuaded doctor Świder to emigrate to the USA after receiving an invitation from a relative in Chicago,. He arrived there on 21/03/1951 with his wife and three children: 13-year-old Anna, 4-year-old Bogdan and Christopher (Krzysztof), born in Manchester in 1950 [1].

After completing a one-year internship at St. Anthony de Padua Hospital in Chicago, Dr. Świder obtained the right to practise medicine in the USA. However, in Chicago he could not obtain recognition of the Polish certificate of specialisation in psychiatry. He moved with his family to New York State, where the regulations were not so restrictive. He took up a job at the St. Lawrence State Psychiatric Hospital in Ogdensburg, on the border with Canada and on the banks of the St. Lawrence River. The bright side of this forced change of residence was the acquisition,

through veteran's entitlements, of a lakeside plot of land in the Canadian Kashubia area of Ontario. There, near the town of Barry's Bay, he built a small house, which was later used for recreation by his growing family [1,7,29].

After 5 years Dr. Świder returned to Chicago. He took up a job at the Hines Veterans Administration Hospital, passed his examinations and in 1960 was certified as a psychiatric specialist. He opened a doctor's office in the Polish neighborhood at 1608 Milwaukee Avenue and was authorised to refer his private patients to several local hospitals and to supervise their treatment at those hospitals: St. Mary of Nazareth Hospital, St. Elizabeth's Hospital, Pinel Hospital and Riveredge Hospital. [1,9]. It was a long and difficult road for Dr. Świder to achieve a stable life in America.

The children of Maria and Konstanty Świder achieved a high social status in their American homeland, at the same time retaining a bond with Polish culture. Polish-born daughter Anna was a physicist, graduate of the Massachusetts Institute of Technology, translator of Polish literature and science. From her marriage to Professor Jacek Furdyn, she had four daughters: Zofia, Wanda, Julia and Jadwiga. In recent years, she was seriously ill. She died on 4 May 2020 [9,30]. The first of the two English-born sons, Bogdan Świder, is a painter and university teacher (Professor of Art, Colorado) [32], and the second, Christopher Świder, is a screenwriter, director, film producer and university teacher (Professor of Cinema and Television Arts Department, Columbia College Chicago) [33,34].

Dr. Konstanty Świder's plans and professional aspirations were thwarted by several factors: the war,



Figure 9. Konstanty Świder (first on the right) next to Gen. Władysław Anders (centre) and politicians of the Polish diaspora, Chicago, Ill, October 15, 1961 [9]

Rycina 9. Konstanty Świder (pierwszy z prawej) obok gen. Władysława Andersa (w centrum) i polityków polonijnych, Chicago, Ill, 15.10.1961 [9]

his stay in Soviet captivity, his wandering life in exile and failing health. But they did not crush his spirit and will to work. Apart from his professional work he actively participated in the social life of the Polish community. He was the chairman of the audit committee of the Association of Polish Physicians in Chicago. For several years he served as the chairman of the National Unity Treasury Committee in that city. On behalf of the Polish Veterans Association in America, he welcomed his former commander, Gen. Władysław Anders, during his visit to Chicago on 15/10/1961 (Fig. 9.). He died in 1965 at the age of 57 [1,30,35].

A few weeks before his death he sent his colleagues - editors of the 'Commemorative Book of the Sanitary Cadet School 1922-1939' – a poem entitled 'There is a Cadet School in Ujazdów...', in which he summarised the life of the tragic generation of graduates of the Ujazdów Cadet School, a quarter

„JEST W UJAZDOWIE PODCHORĄŻOWKA...”

Chicago. Trwają w milczącej rozmowie
pomnik Lincolną z jeziorem Michigan,
którego wody Ziemia — Tytan dźwiga.
Ja w myśli nucę pieśń: „Jest w Ujazdowie ...”

U Odry, Wisły powstała koryta,
nadzieje żywi w swoich wiernych dzieciach.
Srebrną tak drogą dziś Rzeczpospolita
obchodzi teraz Święto Tysiąclecia.

O zawiedzionych nadziejach pokoleń
pora rozmyślać, o ludziach i czasach;
o znaczeniach, których ogień nie wygasa...
... O Sanitarnych Podchorążych Szkole ...

Oto nastaje — Golgota wydarzeń —
i cały Naród dla wolności krwawi,
wszędzie są w boju Żołnierze-Lekarze
i groźą dzieła grzmotów i błyskawic.

Lincoln-Wielkolud, ogromne jezioro,
drapacze nieba prowadzą opowieść...
Wtem trębacz „Zbiórki” gra... Czy to się zbiorą
na defiladę dziś Podchorążowie?

Stają na trąbki dźwięczące wołania
(Może was także czarodziejstwo zdziwi...)
wszystkie roczniki. Ich imion litania...
Każda promocja! Umarli i Żywi!

Więc mi wybaczcie, że Was nagie budzę
śpiący snem wiecznym Żołnierze-Lekarze,
coście polegali dla Prawdy, nie złudzeń.
Krew Wasza przemoc z kart ziemi wymaże...

Pomordowani w „łagrach” i „koncentrakach!”
w miejscach ludobójstw, tortur!, i zatrzy!
Biblijną Rachel nie przestała płakać:
Oblewaj łzami Oświęcim i Katyń ...

Abraham Lincoln — czas go nie uśmierca —
z posągu zeszedł, jest w Hetmańskiej Świątce:
„Wystrzałem w głowę zabił mnie morderca
jak wy za wolność oddałem swe życie”.

Kto to tam stanął z hetmańską buławą?
Czy tysiącletnia za nim wojów świta?
„Do defilady maszerować w prawo”
Koń jego iskry krzyczy spod kopyta.

Słychać głos dziejów... Brzmi wiary wyznanie:
„Wolność nad życie... Hipokratesowe
słowa przysięgi, nasze przykazanie”.
Stąd czerpiem siłę, dążenia odnowę!

Wszak jest coś w życiu, czego czas nie skruszy,
co przetrwa wszystkie tyranie dyktatur.
Iskra wolności żywa w każdej duszy
świeci w ciemnościach ujarzmionych światów.

Gra im do marszu orkiestra skrzydłata.
Krok przybliżają w defilady szyku.
Słodycz melodii z rytmem stóp się spleta.
Idą sprężyste roczniki po roczniku...

Póki wspominam apel nieskończony
patrzmy na Młodych! To Podchorążowie!
Z dalekiej Polski przyszły ich plutony,
śpiewając naszą pieśń: „Jest w Ujazdowie ...”

Konstanty Świder

W styczniu, 1965 r.

Figure 10. Konstanty Świder's poem 'There is a Cadet School in Ujazdów...', January 1965 [5]

Rycina 10. Wiersz Konstantego Świdra „Jest w Ujazdowie Podchorążówka...”, styczeń 1965 r. [5]

of whom were killed, murdered or died prematurely during the Second World War (Fig. 10) [5].

May this article serve to include the name of Dr. Konstanty Świder among the co-founders of Polish military psychiatry.

Dr. Świder's poems have been left untranslated. Written in the language of old Polish patriotic songs and epic poems, they describe the perpetual fight for national independence, the necessity of sacrificing one's life for the Fatherland, and the sacred mission of the military in the fight against tyranny. They also reflect on the role of military physicians in wartime. Though not leading the attack against the enemy, their contribution, being always on duty saving the lives of the sick and wounded, is of no lesser importance.

Literature

- Świdrowa M. Życiorys doktora med. Konstantego Świdra, podpułkownika Wojsk Polskich Drugiego Korpusu (udostępniony przez prof. dr hab. Stefana Wesolowskiego). [Biography of Dr. Konstanty Świder, Lieutenant Colonel of the Polish II Corps (made available by prof. Stefan Wesolowski MD, PhD).] *Med Dydak Wychow*, 1998; 30 (3/4): 125-130
- Edward Kleszczyński. www.senat.edu.pl/historia/senat-rp-w-latach-1922-1939/senatorowie-ii-rp/senator/edward-kleszczyński
- Sanitary Military Regulations San 5/1924. Ministry of Military Affairs, Warsaw 1924
- Central Military Archive. Akta personalne, sygn. [Personal records, ref.] Ap. 12 276
- Markowski B, ed. Podchorążowie z Ujazdowa. Wspomnienia Szkoły Podchorążych Sanitarnych, 1922–1939. [Officer Cadets from Ujazdów. Memoirs of the Cadet School, 1922–1939.] Club of Graduates of the SPS, London 1972: 142-143, 366-367, 411-412, 427
- Main Medical Library, Old Book Department, Files of the Warsaw-Białystok Chamber ref. PL\327\1\0\5711
- Jan Garbowski. www.pl.wikipedia.org/wiki/Jan_Garbowski
- Jan Kollań-Szrednicki. www.pl.wikipedia.org/wiki/Jan_Kollań-Szrednicki
- Family archive of prof. Christopher Swider from Chicago, Ill.
- Podchorąży Służby Zdrowia: kwartalnik Batalionu Szkolnego Podchorążych Zawodowych S.P.S. [Healthcare Cadet: a quarterly of the S.P.S. Vocational Cadet School] Wilhelm Borkowski, ed. BN ref. P.260195 A
- Wesolowski S. Od kabaretu do skalpela i lazaretu. [From cabaret to scalpel and lazzarette] *AWES*, Warsaw 2006: 32, 89, 104, 258
- Stefan Wesolowski. [www.pl.wikipedia.org/wiki/Stefan_Wesolowski_\(lekarz\)](http://www.pl.wikipedia.org/wiki/Stefan_Wesolowski_(lekarz))
- Zygmunt Csadek. www.pl.wikipedia.org/wiki/Zygmunt_Csadek
- Władysław Bończa-Uzdowski. www.pl.wikipedia.org/wiki/Władysław_Bończa-Uzdowski
- Jerzy Nadolski. www.pl.wikipedia.org/wiki/Jerzy_Nadolski
- Ignacy Tadeusz Baranowski. www.pl.wikipedia.org/wiki/Ignacy_Tadeusz_Baranowski
- Świder K. Padaczka zwana samoistną, jej stosunek do padaczki organicznej i częstość występowania. [Spontaneous epilepsy, its relation to organic epilepsy and prevalence] *Warsz Czas Lek*, 1936; 13 (45): 765–768; 13 (46): 785-789
- Idem. Dissertation Written by Konstanty Świder in order to Obtain the Degree of Doctor of Medicine at the Medical Faculty of Józef Piłsudski University in Warsaw. Dissertations for the degree of Doctor of Medicine of former graduates of the Cadet School, No. 1. Druk "Sila", Warsaw 1937: 29
- Rybka R, Stepan K. Rocznik Oficerski 1939: stan na dzień 23 marca 1939. [Yearbook of Officers 1939: state on 23 March 1939.] Księgarnia Akademicka: Fundacja Centrum Dokumentacji Czynu Niepodległościowego, Cracow 2006: 376; 502
- Witold Starkiewicz. www.wikipedia.org.pl/wiki/Witold_Starkiewicz
- Julia Starkiewiczowa. www.wikipedia.org.pl/wiki/Julia_Starkiewiczowa
- Swider Ch. Unsung Heroes of a Tragic Generation. *Mil. Phys.*, 2021; 99 (4): 210-218
- "Karta" Centre. List of cases conducted by the NKVD organs of Western Ukraine and Belarus (selection from the Book of Registration of Archival and Investigative Cases of the NKVD USSR), vol. 405, p. 127, item 6.
- Kaczanowski G. Służba Zdrowia 5 KDP w bitwie o Monte Cassino. In: Suchcitz A, Wawer Z et al, ed. 5 Kresowa Dywizja Piechoty 1941–1947, zarys dziejów. [5th Kresy Infantry Division 1941-1947. An outline of its history.] Widows, Orphans and Invalids Relief Fund of the 5th Kresy Infantry Division in Great Britain, London 2012: 262-271
- Brzeziński T. Służba zdrowia Polskich Sił Zbrojnych na Zachodzie 1939–1947. Z Armią Andersa z ZSRR ku Polsce. Polskie Towarzystwo Ludoznawcze, Wrocław 208: 227
- Świder K. Zapobieganie chorobom psychicznym w Korpusie. In: Sokolowski T, ed. Pamiętnik Zjazdu Polskich Lekarzy Wojskowych w Bolonii, 17–20.12.1945 r. 476 Sekcja Wydawnicza 2 Korpusu Polskiego, Bari 1946: 121-136
- Świder K. Zapobieganie chorobom psychicznym w 2. Korpusie Polskim. *Mil. Phys.*, 2021: 99 (4): 199-209
- Penley, Llanerch Panna and Isoyd Park Polish Hospitals. www.wrexham-history.com/penley-hospital/
- Iscoyd Park History. www.iscoydpark.com/2018/10/the-restoration-of-iscoyd-park/
- Anna M. Furdyna. www.jstor.org/stable/25777341, www.goodreads.com/author/show/3925447.Annam_Furdyna
- Bogdan Swider. www.sites.coloradocollege.edu/bswider/?page_id=10
- Chris Swider. www.linkedin.com/in/chris-christopher-swider-34a6308
- Jablonska J. Children in Exile: Recollections of Children Deported to the Soviet Gulag. *Cosmopolitan*, 2011: 3 (3). www.cosmopolitanreview.com/children-in-exile/
- Dziennik Związkowy – Polish Daily. *Zgoda*, 1961; 53 (243): 1; 8
- Przyłuski J. Wspomnienie o wzorowym żołnierzu, lekarzu i wspaniałym człowieku. *Dziennik Związkowy – Polish Daily. Zgoda*, 1965; 57 (244): 46

Prevention of Mental Diseases at the Corps Level

Zapobieganie chorobom psychicznym na szczeblu Korpusu

Konstanty Świder

Major, MD, the Commander of the 342nd Psychiatric Team of the 2nd Polish Corps in Italy
Mjr dr Komendant 342. Zespołu Psychiatrycznego 2. Korpusu Polskiego we Włoszech

Abstract Paper delivered on December 19, 1945 at the Conference of Polish Military Physicians in Bologna [1,2]. The subject of the paper is prophylaxis of mental disorders in the Polish II Corps in Italy from the end of the war (May 1945) to the evacuation of the Corps to the United Kingdom (autumn 1946). Both organisation of the psychiatric support and preventive procedure rules for the most frequent forms of psychiatric and behaviour disorders are presented in the unique environment of the post-war disarray, with an unclear political situation and uncertainty of the soldiers' personal future. Described in the paper are: the role of the Centre for the Exhausted, forms of therapy, non-medical preventive strategies designed to reduce referrals to the psychiatric hospitals, evacuations to the rear and discharges from the armed forces. The paper, published in 1946 in the 'Conference Proceedings' that were not widely available, fills the gap in knowledge on psychiatric prophylaxis in the Polish Armed Forces in the West, and recalls doctor Konstanty Świder (1908-1965), a meritorious military psychiatrist, forgotten in post-war Poland. Both the original terminology and spelling have been maintained in the reprint of this paper.

Key words: military healthcare history, Polish Armed Forces in the West, Polish psychiatrists

Streszczenie Referat wygłoszony 19 grudnia 1945 r. na Zjeździe Polskich Lekarzy Wojskowych w Bolonii [1,2]. Tematem referatu jest profilaktyka zaburzeń psychicznych w 2. Korpusie Polskim we Włoszech w okresie od zakończeniu działań wojennych (maj 1945 r.) do ewakuacji Korpusu do Anglii (jesień 1946 r.). Przedstawiono organizację pomocy psychiatrycznej oraz zasady postępowania zapobiegawczego w najczęstszych postaciach zaburzeń psychicznych i zaburzeń zachowania w specyficznych warunkach powojennego rozprężenia, niejasnej sytuacji politycznej i niepewności co do osobistej przyszłości żołnierzy. Omówiono rolę „Ośrodka dla Wyczerpanych”, formy terapii oraz niemedyczne strategie zapobiegawcze w ograniczaniu hospitalizacji psychiatrycznych, ewakuacji na tyły i zwolnień z wojska. Artykuł, opublikowany w 1946 r. w nieudostępnianym powszechnie „Pamiętniku zjazdowym”, wypełnia lukę w wiedzy na temat profilaktyki psychiatrycznej w Polskich Siłach Zbrojnych na Zachodzie oraz przypomina postać doktora Konstantego Świdra (1908-1965), zasłużonego psychiatry wojskowego, zapomnianego w powojennej Polsce. W przedruku artykułu zachowano oryginalną terminologię i pisownię.

Słowa kluczowe: historia wojskowej służby zdrowia, Polskie Siły Zbrojne na Zachodzie, psychiatry polscy

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My paper will consist of an introductory part, dealing with the necessary organisational details, and a proper part.

I. Organisational data

The increasing number of neuro-psychiatric patients as the duration of the Second World War prolonged, who often unnecessarily got too far behind and

overloaded the rear elements of the sanitary evacuation, forced the English Health Service to seek a new solution in this field. The keynote of this solution is the creation of a separate sanitary evacuation axis for psychiatric patients with the following elements:

- 1) at corps level: Corps Psychiatric Team - psychiatric patients from the units are directed through the sanitary evacuation route to the Exhaustion Centre, from there to

- 2) at army level – the Advanced Psychiatric Centre, and from there to the developed
- 3) at frontline level – the Base Psychiatric Centre.

From the Base Centres, evacuation took place by sea to psychiatric hospitals in the United Kingdom, India and Africa. In the second half of 1944, the British had all corps on the Italian front staffed with psychiatric teams. The 342nd Polish Psychiatric Team began work on 15 May 1945. It was evacuated due to the lack of suitable conditions to the neuro-psychiatric ward of the 7th War Hospital. The details of the Psychiatric Team will be discussed below. The advanced Psychiatric Centre consists of 9 doctors and 84 regulars. The duration of a patient's stay there is calculated to be 2 weeks. The Base Psychiatric Centre is staffed in a manner roughly similar to the Advanced Centre except that the patient's stay is calculated to be 3 months.

The organisation and scope of medical psychiatric care of the II Corps was defined by the order of the Polish II Corps No. 70 of 2 June 1945 and the associated Technical Instruction of the Chief of Corps Health Services of 29 May 1945, paragraph 36, which I provide in the abstract.

A. Organisation

1. The psychiatric unit of the Health Service of the II Corps is the 342nd Psychiatric Team. Composition of the Team according to the military ethic of the Command of the II Corps: Head of the Team - Specialist Psychiatrist - Major, doctor, team physician – Capt. (he arrived on 21 August 45), 6 regular psychiatric nursing staff, 1 scribe, 1 driver. This number of staff in practice proved to be too small. At present there are 4 additional orderlies working in the Exhaustion Centre, commanded by the order of the Chief of the Health Service of the II Corps from the 31st Sanitary Company.
2. The Commander of the Psychiatric Team reports to the Chief of the Health Service of II Corps and is an advisor to the Chief of the Health Service of II Corps in matters of mental health of soldiers. For this reason he is also called the Corps Psychiatrist.
3. The Psychiatric Team Commander has the disciplinary authority of the Battalion Commander.
4. The duties of the Psychiatrist of the II Corps: the Corps Psychiatrist submits reports, briefs, statements and conclusions on the mental condition of the troops, prevention of psychiatric illnesses, treatment and evacuation of psychiatric patients to the Chief of Health Services of the II Corps.



Figure 1. Maj. Konstanty Świder MD, PhD, Psychiatrist of the Polish II Corps, 1945 (family archive of prof. Christopher Swider)

Rycina 1. Mjr dr med. Konstanty Świder, psychiatra 2. Korpusu Polskiego we Włoszech, 1945 r. (archiwum rodzinne prof. Christopfera Swidera)

To this end:

- a) He establishes an Exhaustion Centre (Ośrodek dla Wyczerpanych) on the Corps sanitary evacuation axis at the 31st Corps Sanitary Company or at one of the Field Evacuation Hospitals. All cases of psychiatric illnesses are sent from the Military Units and Corps Units to this Centre.
- b) He remains in constant contact with Hospital Commanders, Chiefs of Health Services of the Great Units, Commanders of Sanitary Companies, Unit Physicians, if necessary with Unit Commanders and Heads and Chiefs of Departments directly or indirectly taking care of the mental state of Corps soldiers (Training, Propaganda and Press, Pastoral Care, Department of Soldier Welfare, Department of Culture and Education, Justice). By means of direct exchange of views with the above, by means of readings, communications, professional articles in the press, and by means of written instructions, he ensures that the most appropriate level of care for the mental health of soldiers is maintained.
- c) He remains in communication with further links in the evacuation of psychiatric patients (Neuro-psychiatric Wards of Military Hospitals).

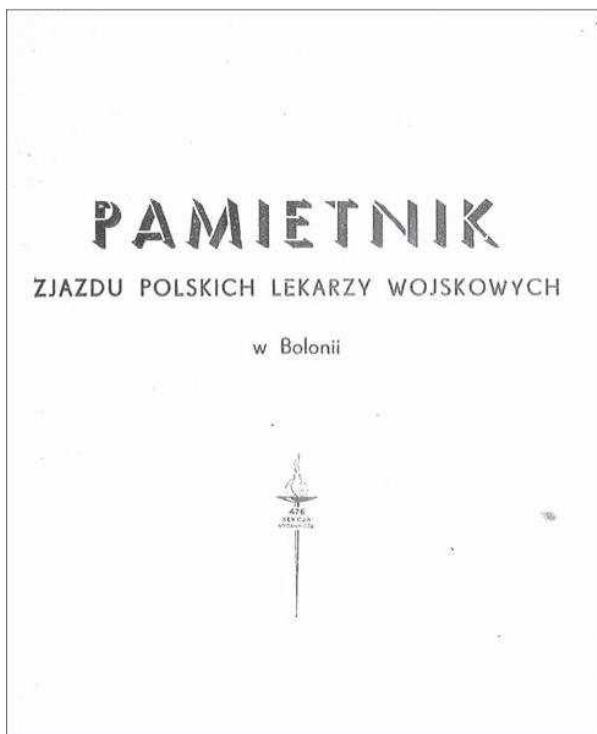


Figure 2. Cover of Proceedings of Polish Military Physicians' Conference in Bologna, December 17-20, 1945 [1]

Rycina 2. Okładka Pamiętnika Zjazdu Polskich Lekarzy Wojskowych w Bolonii, 17-20 grudnia 1945 r. [1]

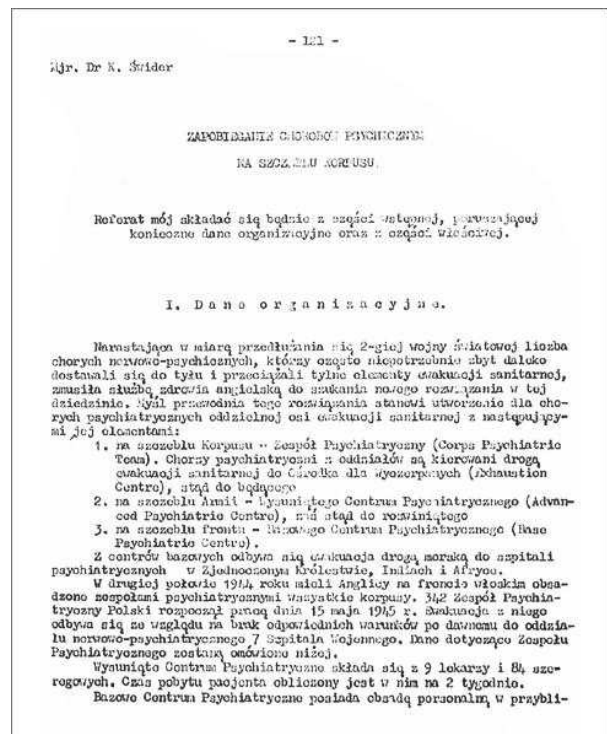


Figure 3. First page of paper presented by Maj. K. Świder MD, PhD, December 19, 1945 [2]

Rycina 3. Pierwsza strona referatu mjr. dr. med. Konstantego Świdra wygłoszonego 19 grudnia 1945 r. [2]

- d) Together with the physician of the Psychiatric Team, he issues psychiatric certificates at the request of the Field Courts.
- e) He issues rulings on the degree of fitness for military service, where possible.

B. Evacuation of psychiatric patients

1. Unit physician level

- a) General. The unit physician performs the duties of the psychiatrist of his unit himself in the sense that, in cases where he considers it necessary, he can and should consult the Corps Psychiatrist. From the perspective of preventing mental and borderline diseases, this level is the most important of all levels. The scientific world is now tempted to establish a more permanent basis for the science of group and collective psychology. The II Corps psychiatrist hopes for good cooperation with the unit physicians in this field.
- b) Referral of psychiatric patients for in-patient and out-patient treatment will be made by means of a referral card for psychiatric examination (treatment) (see template attached). The

diagnosis section of the evacuation card A.P./W. 3118 should in all cases contain the diagnosis 'exhaustion'. The use of this expression avoids the attribution of the label 'mentally ill' to the patient.

2. Level of Sanitary Companies and Field Evacuation Hospitals

The care of psychiatric cases is to evacuate them as quickly as possible and to ensure that cases with the diagnosis of 'exhaustion' do not go to the rear outside the Exhaustion Centre.

3. Level of the Exhaustion Centre

The Exhaustion Centre is designed to accommodate 30 beds and will be based either at the 31st Sanitary Company or at one of the Field Evacuation Hospitals. All cases of psychiatric diseases from the Large Units and Corps Units will be taken by sanitary evacuation to this Centre, where they will be segregated into those sent back to the Units, those under observation or treatment, and those to be evacuated. The time of stay in the Exhaustion Centre under observation or treatment should not exceed one week (in rare cases 10 days). The premises of the Centre should, in principle, be in a building with adequate facilities for

patients' comfort, games, entertainment, newspapers, walks, baths and general peace.

4. Further levels of medical evacuation of psychiatric patients

Further evacuation from the Exhaustion Centre will be based on the neuro-psychiatric wards of the Military Hospitals.

II. Prevention

On the basis of seven months' work as Corps Psychiatrist to date, I outline the directions for preventive work in a series of consecutive points.

1. Evacuation of psychotic patients and more severe borderline cases

The Exhaustion Centre acted as a sieve, retaining [?] cases from the total number and letting through [?] cases to the 7th Military Hospital. In percentage terms this ratio is expressed as [?] % dealt with at the level of the Exhaustion Centre, [?] % evacuated to the Hospital. Obviously, in the past, these cases would have been handled entirely by hospitals. The relevant data, obtained by me from the Psychiatrist of the 5th British Corps, Major Kaldano, are as follows: 30 some per cent handled at the level of the Exhaustion Centre, 60 some per cent evacuated to the Advanced Psychiatric Centre. This almost inverse ratio to the figures of the Exhaustion Centre of the II Corps, is explained by two essential factors: a) In order to preserve the valuable guiding principle of the organisation of the English Health Service despite the absence of an Advanced Psychiatric Centre, the main task of which is the final handling of functional cases and some borderline cases, I decided to take over part of the work of the Advanced Psychiatric Centre and handled functional cases in the Exhaustion Centre, trying to ensure that mostly only psychotics were evacuated to the Hospital, b) Under frontline conditions, the number of evacuees would have to be at least 20% higher. The fact that functional illnesses are not admitted to Hospitals is of great preventive importance, as it protects these cases from aggravation and persistence of functional conditions, which become more difficult to treat with psychotherapy the later it is applied and the further away from the front line. On the other hand, as a result of the working system of the Corps Psychiatrist, who penetrates into the mental manifestations of the life of the troops, some diseased cases are brought to hospital sooner, which is very important if modern treatment methods can be provided for them there.

A number of psychiatric cases of the II Corps were taken to hospitals bypassing the Exhaustion Centre.

According to cursory data the number is about 60 cases. Careful consideration of disease processes in patients at the Centre, combined with my visits to Unit Commanders, Unit Physicians and Heads of Staff units, if any conflicts in the lives of patients require it, as well as an exchange of views and observations on phenomena in the psychosocial life of soldiers, carried out on the occasion of these contacts, will produce rich material, which by its very content sets directions for the preventive work of a psychiatrist. Of course, in order to feel comfortable doing this work, the psychiatrist must have knowledge of the conditions of military life founded on personal experience.

2. Exemption from the army

The analysis of certain medical cases, made from the viewpoint of the mental hygiene of collective life, makes it necessary to issue an 'E' category and thus to cause the removal of psychopathic individuals, chronic alcoholics with no sign of improvement, from the ranks of the army. As an example, I give in summary the medical history of L. 244:

Kan. R.J., electric welder, born in 1916, in the present unit from Russia, single, diagnosis: alcoholic psychopathy, freckled face with the look of a thug, height 173, build type rather close to athletic, pulse 84, no organic or major functional changes in the nervous system. Referred by the unit physician ex officio. Present complaints of the patient: pains in the region of the heart, upset by bad relations and constant humiliation in the unit. Has been 'unfairly' punished several times. He had disputes with his superiors. Diseases suffered: syphilis infection in June (3 salvarsan treatments and 1 penicillin treatment), gonorrhoea in July 1945. Son of a blue-collar worker. In childhood he was a troubled child and a bully. Life course of the patient: 7 branches of comprehensive school, 2 further education courses. He worked in the railways. He was deported to Russia, in 1941 he joined the Polish Armed Forces in Kormin. He went through the entire Italian campaign. Sexual sphere: frequent sexual relations with prostitutes. Lack of intercourse gives him insomnia and bad mood. He has constant conflicts in the unit. Religion is indifferent to him. Wants to move to transport units. Mixed mental type. On 14/08/45 he was cautioned about the harmfulness of alcohol, when he went away arbitrarily for a pass for a 'few hours'. He has constant conflicts with his superiors. 22/08/45 Commander's opinion: driver, very low efficiency at work, negative to social life, alcoholic and erotomaniac with criminal tendencies, cynic, having no moral principles. Uses passive resistance, uncooperative. Exerts a negative destructive influence on those around him. He was punished 6 times: 1. for

disobedience of an order and arbitrary departure – 14 days of medium detention. 2. Getting drunk during duty hours – 7 days of medium detention. 3. Arrogant behaviour towards an officer – 7 days of medium detention. 4. Being out of the area for 12 hours – 5 days of medium detention. 5. Misleading a commanding officer, alcohol abuse and brawling – 14 days of medium detention. 6. Misbehaving towards a superior officer – 3 days of light detention. Recently broke into an Italian flat while drunk - court case pending. Physician's opinion: negative attitude towards collective life, causing brawls. He underwent 1 treatment against lues, 1 treatment against gonorrhoea. 15/09/45 Extract from the alcohol abuse card. He has been drinking since he was in the Regiment in 1942. On average once a week in the evening, less often during the day. Lately he has been getting drunk more often and in the afternoon during working hours. After drinking he generally behaved calmly, when he was irritated by something, he provoked a strong brawl. Then he is talkative and uses filthy words in his speech forcing the soldiers living together with him to leave their quarters. On 10/10/45 I visited the Regiment Commander. The data about the patient as in the opinion. A notorious individual. All commanding officers up to and including the Regiment Deputy Commander knew his misdeeds by heart. Recently he broke into an Italian flat. I was amazed by the great work of the Commanders who managed to deal with this psychopath so far. On 16/10/45 he was discharged to the unit with a military and medical certificate for the category 'E'. A short analysis of the case: a 29-year-old individual, with a psychopathic disposition. He does not respond to punishments and educational efforts. It is necessary to release him from the army to prevent the decomposition of collective life and to save the patient from further severe conflicts and imprisonment. My stay in the patient's unit gave me an opportunity to talk to the unit physician and to the commanders up to and including the Regiment Commander about the current general issues of the soldiers' mental state.

3. Change of assignment

Sometimes the course of a soldier's life in his unit is such that a change of environment is necessary to remove complexes and traumas acting on his self. Making the transfer possible is then a turning point for the improvement in the soldier's well-being. As an example, I give a summary of the medical history of L. 228:

Sapper K.S. admitted on 11/08/45, bricklayer, born in 1911, diagnosis general neurosis, height 154, rather pyknic build type, excitable pulse 84, no organic

changes in the nervous system, functional changes in the form of general neurosis of a more significant degree. Present complaints: overtired, headaches, heart trouble, feels constantly irritated and restless. About 20 attacks of malaria. Family history of no significance. Completed 4 years of common school, joined army in Russia. Rare sexual intercourses with casual women. Asks to be allowed to rest for long periods. Schizotypal mental type. On 01/09/45 he received a 5-week leave, which he spent in the Rest House in Porto San Giorgio. Opinion of the Commander dated 08/09/45: function of sapper, high efficiency in non frontal work, not very efficient in frontal work when threatened by enemy fire due to the fact that he cannot control himself. No visible advantages or special disadvantages. Sometimes he liked to get drunk. His behaviour on duty was correct except for the fact that he sometimes wandered away arbitrarily. On 25/06/45 he was punished with 5 days of medium detention for arbitrary leaving the accommodation area. General opinion sufficient. On 09/10/45 he returned from the Rest House and stated that he would like to move out of the unit because he felt harmed. He went through all the action and got nothing for it. He was in all the battles and went on more patrols than others. During a scuffle, one of the non-commissioned officers hit him in the face and there was a fight, but the non-commissioned officer apologised for it, so there was no point in complaining to his superiors. He thinks that when he returns to the unit, he will be further persecuted. So it does not matter where, as long as he is transferred. He had already asked for the transfer several times, but was not allowed to report. On 09/10/45 he was discharged to the unit. On 24/10/45 I was in the patient's unit. The commander was very well aware of his condition, but he did not know about the conflicts and ill disposition of the patient in the unit. No one had ever reported to him about the desire of the sapper K.S. to be transferred. Having illustrated the psycho-pathological side of the issue, the Commander promised to support the transfer case and to report it in this light to the higher superior. On 27/10/45 I visited the 2nd Deputy Quartermaster of the Corps to arrange the transfer to another big Unit. The Sapper K.S. was indeed transferred and given a function in his specialty at the new place. Case Study: a 34-year-old individual with a schizoid disposition feels an unmotivated complex of being harmed and mistreated. Who knows whether the fact of his uncontrollable behaviour at the front, which is known to all his colleagues, does not play a role here. As he wished, he was transferred to another unit and thus given the opportunity to rebuild his weakened

social self. On the same occasion I also had a conversation about the mental hygiene of soldiers.

4. Change of function

Sometimes the care of a soldier's mental state requires a change of function. I illustrate this with the example of the medical history of L. 40:

Pvt. K.R., admitted on 11/06/45, he suffers from high nervous excitability since a 3-month stay under Allied bombardment in France in 1944. He now has a fear of the steering wheel. When starting the carriage he feels very fearful, only after driving a dozen or so kilometres does he become accustomed to driving the carriage, but he gets tired of it. Symptoms of severe vegetative neurosis in the nervous system, mixed mental type with syntonetic predominance. 16/06/45 he was sent for a 3-week rest to Porto San Giorgio. 24/06/45 I was visiting his commanding officer, I presented the psycho-pathological side of the issue. The commanding officer transferred Pvt. K.R. to the function of warehouseman. Summary of the case: Pvt. K.R., 51, a driver, suffers from anxiety neurosis and a fear of the steering wheel. After a rest in the Rest House he is released from his driving position and gets a job as a warehouseman. It does not mean that he will be able to return to the steering wheel after some time.

5. Holidays

In many cases, in addition to psychotherapeutic and pharmacological treatment, it is necessary to grant a longer leave of absence for neurotics, neurasthenics, in some forms of psychopathy and for the exhausted. Holidays are granted for a period of 2-6 weeks, in rare cases even 2 months. The places to which patients receive leave depending on the type of disorder are: Corps Soldiers' Rest Houses from the distribution of the Exhaustion Centre or to other places, which is left to some patients to decide. The leave granted in trivial cases of neuroses of various types, neurasthenia, psychopathy and states of exhaustion need no special discussion. On the other hand, I consider it necessary to deal more thoroughly with the more serious conflicts in the soldier's life. The Psychiatrist's approach to these conflicts will be illustrated in the next section.

6. Interventions with Commanders and authoritative factors in matters of soldiers' conflicts

To illustrate the essence of this work, let me give two examples:

Example 1. medical history L. 129: Pvt. S.Ł. admitted on 28/07/45, vulcanizer, bachelor, born in 1921, an old front soldier of Infantry Battalion, diagnosis: severe neurasthenic reaction, height 167, pyknic body build, excitable pulse 84. No organic changes in the nervous system, trembling of fingers,

quite vivid reflexes. Present complaints of the patient: in July this year he went to the river to wash his underwear on a jeep, which he assembled himself. He did not have a permit to use the jeep, which at that time was reserved exclusively for the commander of the battalion. On his return he came across the Baon Commander. The Commander spoke very harshly to him in front of other soldiers. The patient felt touched by this and standing at attention in nervousness he said: please don't shout, it's better to punch. For this outburst he was given 28 days of medium detention. On the first day of his stay in custody he fell mentally ill, as a result of which he was evacuated by the unit physician to the Exhaustion Centre. In the Centre he was diagnosed with a severe depressive state with suicidal tendencies, intrusive thoughts about the harm done, outbursts of crying and lamentations 'I have never been punished before, I came as a volunteer, I made my own jeep, they could treat people differently, etc.'. He went through the entire Italian front with his battalion. He feels very wronged by the punishment inflicted on him. He does not want to return to his unit at any price, preferring instead to kill himself. Syntonetic mental type. On 28/07/45 he was given a referral card for examination: a mechanic, high efficiency at work, his behaviour so far has been faultless, no previous criminal record. On 04/08/45 I visited the Commander of the patient and the Brigade Commander, both of whom described the present serious mental state of the soldier S.Ł. and asked for appropriate approach to him when he returns to the unit after recovery. I must take this opportunity to point out that such talks are not always easy, short or particularly pleasant. The Brigade Commander promised to consider the matter carefully. The patient calmed down after receiving the news from me that he would probably not have to serve his sentence after returning to his unit. I gave him a two-week leave, after which he calmed down considerably, cancelled his request to be transferred to another unit and was discharged. According to later data, he is not required to serve his sentence for the time being. A short analysis of the case: shooter aged 24, pyknic body type, and syntonetic mental type, he is experiencing a period of severe neurasthenic reaction of depressive type. The cause of this state is the suppression of the self (feeling wronged) by a punishment undeserved in his opinion. His detention at the most severe period in the Exhaustion Centre, combined with the granting of leave and my personal presence in the unit to inform the Commanders of his condition, contributed to a quick and successful resolution of the issue. Of course, I did not fail to use this opportunity to raise general matters of mental hygiene with the Commanders.

Example 2. medical history L. 202: officer cadet, admitted on 24/09/45, court trainee, in the present unit from Russia, born in 1908, unmarried, diagnosed neurasthenic reaction, height 175, strong build, pulse 72, no organic changes in the nervous system, quite strong tremor of the fingers, slight stuttering in speech. He complains of feeling tired, irritated, feels tingling in the skin and strong pulsations in the abdomen. He feels especially tired and weak in the morning, his thoughts revolve against his will around the same subject, namely the feeling of being hurt in the unit. He had no serious illnesses, his family was healthy, his mental type rather cyclothymic. The son of a small farmer. Until the age of 18 he grazed the village cattle. One day he started to think of the wide world and went looking for happiness there. We see him in Silesia as a miner, a waiter, a porter or a newspaper seller. He then set up a souvenir kiosk in Rabka Zdrój, made some money, set up a second kiosk selling devotional items and a third one selling books. In 1932, he passed his matriculation exams as an extramural student, and in 1937, at the age of 29, he graduated from the Faculty of Law and Political Science at Vilnius University. Released from a Soviet prison under amnesty in 1941, he joined the Polish Army in Russia. In the autumn of 1942, after completing cadet school in Karas, he was assigned to his current unit. At first he did well. In 1943, in Kirkuk, at a theatre performance organised as part of the Brigade, he was publicly insulted by one of the officers, who announced through a megaphone to the troops attending the performance that the patient had taken the money and did not buy the tickets, and that he had misled the troop by pointing to a place for his troop that was not where it was supposed to be. This kind of announcement embarrassed the patient. As the officer in question did not want to retract the announcement publicly, the patient went to the megaphone during the break and announced that the news given by the officer that he had taken the money and pointed to the wrong place was false, and that the officer had lied twice. For this speech the patient was punished by the Commander with 18 days of light detention. The patient considered this speech to be well thought out and normal. By taking the matter to the legal route he would never have obtained complete satisfaction, for even if this officer had been punished, only officers of equal and higher rank would have known of the punishment, while the rest of those assembled at the performance would have known only that he had committed 2 dishonourable acts. On the second occasion he was punished with a 14-day medium detention for leaving his area of accommodation in Palestine. One Sunday he went to a woman he knew without a pass and met

his Commander there, as fate would have it. For this he received 14 days of medium detention. This punishment the patient considers harsh. Since that time, the patient noticed the Commander's bad attitude towards him. He asked for a transfer, but the commanding officer refused. So there was nothing left for him but to keep quiet and not to be discouraged by difficulties, especially as it was the time of his departure for the Italian front. At the front, he initially carried ammunition to artillery positions, then served as Weapons Officer, and in August 1944 was seconded to the Mortar Combat Staff. After the end of operations in Italy, he decided to claim what was rightfully his, and made a report to the Regiment Commander in July asking why he had not been promoted. On reporting he received a completely unexpected answer. The Commander declared to him that his performance to date in the Regiment equated to zero. This assessment shook the patient to the core, he suffered a stomach cramp, pain in the heart area, and could hardly control himself. He began to doubt justice in general. To achieve his aim, he asked for a report to be made to the Division Commander. After the report to the Divisional Artillery Commander, which was quite objective, the patient found himself first in the 7th Military Hospital, then in the Exhaustion Centre, as he noticed a considerable deterioration of his condition, he was having attacks of intrusive thoughts and feared some conflicts in the unit. Having analysed this case, I came to the conclusion that a report to the Division Commander must take place as soon as possible. A satisfactory course of this report will simply be a kind of causal treatment. Trying to bring the patient to a normal state, only to be discharged afterwards, I considered an inferior way of dealing with him. Opinion about the patient: non-commissioned officer of observation, due to a short period of practice in the headquarters of the firing range, his work was not very efficient. After a longer practice with his abilities he could be a very good worker. He does not deal with matters of a political nature. He is interested in economic matters. In this field he shows a lot of initiative. Thanks to these qualities he could be used as an economic officer. He does not like sedentary work. Working on the move, even hard work would give him satisfaction. He has no characteristic weaknesses or addictions. He is liked by privates. After complementing his deficiencies he could take an officer position. A 3-month training would be advisable. Opinion of the unit physician: in a conversation with him I stated that he was irritated and excited by things that others would ignore. He is irritated and it takes a lot out of him to control himself. On 18/10/45 I reported to the Division Commander, where I reported on the

patient's state of health, outlined the reasons why I had advised the patient to report as soon as possible, and requested that the patient be quickly admitted. Undoubtedly, a comprehensive characterisation of the patient could have served as helpful material to facilitate a sufficiently profound decision in the matter. In the meantime, during his stay in the Exhaustion Centre, the patient was transferred to another unit. According to the patient's story, the form and course of the report to the Commander were entirely satisfactory to him. After a few minutes of formal conversation, the Commander asked the patient to sit down and then had a conversation with him for about 2 hours. The patient was promised that he would be given a promotion at the earliest opportunity and his transfer to another unit was cancelled for the time being. On 17/11/45 the patient left the Exhaustion Centre for a 1-month holiday in Como. Summary of the case: a 37 year old cadet arrived at the Exhaustion Centre in a state of neurasthenic reaction caused by a sense of wronged self by being overlooked for promotions and a severely prejudicial assessment of his work by his superior Regiment Commander. As a man of strong mental structure and character, he was able, despite the difficulties, to present his superiors, up to and including the Division Commander, with his position on the case. The psychiatrist's presentation of the psychiatric analysis of this case to the Division Commander gave the Commander ample material for possible use to the satisfaction of the patient. Intervening in conflict cases with Commanders at various levels provides the psychiatrist with very interesting material both from the point of view of individual and collective psychology. Many times discussions with Commanders are very difficult and require a lot of tact, insight and patience on the part of the psychiatrist. However, one or another platform of reasoning will always be found in the name of the good cause and with a truly sincere desire to surround the soldier with the best possible care. At this point I must emphasise my repeated admiration for the commanders' knowledge of the soldier's life issues and their great efforts and best intentions in seeking ways to provide good care for the soldier's mental state.

7. Interventions on collective mental disorders in units

Sometimes a number of conflicts accumulate in one unit. The analysis of these conflicts simply imposes the necessity of initiating certain preventive steps, as I will illustrate with the example of the medical history of L. 108:

Sgt. S.F., admitted on 20/07/45, born in 1897, profession: entrepreneur in the automotive industry. Diagnosis: neurasthenic reaction in a schizoid individual. Height 174, robust build, good nutrition, pulse 84, muffled sounds, no organic symptoms from the nervous system. He was depressed and very tired with the relations in the unit. While he was talking about how the commanding officer scolded him, he burst out crying several times. On 16/07/45 he was punished with a 14-day medium detention for improper behaviour towards the chief. The patient's explanation that he had been feeling ill for several weeks was not taken into account by the Commander. The patient had suffered a luetic infection in March 1943 and was undergoing prescribed treatment. The Kann reaction is currently negative in the blood. Opinion dated 23/07/45. In the unit since 25/06/43. He works as a tank transporter driver. Low productivity at work, due to great and constant reluctance to work. An old and very good driver. At work he is hindered by his laziness, he is a chatterbox, a gossip. He experiences delusions of grandeur. Deceitful and false intriguer. Lacks a sense of patriotism and any sense of duty. Disregards his duties and has a demoralising effect on those around him. Punished 2 times. General opinion unsatisfactory. On 01/08/45 he received a 4-day leave of absence to the Rest House in Porto San Giorgio. On 29/08/45 he returned from the Rest House in an improved condition and was discharged to the unit. On discharge I analysed his health situation and advised him to try to continue working in the unit. After reporting to the unit the commanding officer ordered Sgt. S.F. to be taken into custody immediately to serve the imposed sentence. A verbal request for the postponement of the sentence for a certain time was not taken into consideration by the Commander. In order to give an opinion on his ability to serve the sentence, the patient was sent on an out-patient basis to the Exhaustion Centre and received a certificate of incapacity to serve the sentence for 6 weeks. The Commander responded to this decision with a letter to the Chief Physician of the Corps Troops, which I give verbatim: 'I request you to examine and issue a ruling as to whether Sgt. S.F. is fit to serve the sentence of medium detention. I would like to mention that Sgt. S.F. has been evading serving the sentence for a long time on the grounds that he is mentally exhausted. By his evasion he undermines the authority of the Commander and makes it impossible to maintain discipline in the company. On 08/09/45, when he was supposed to be sent to the detention centre, the doctor X.Y. granted him release from serving the sentence for the period of 6 weeks. I would like to mention that on 29/08/45 the above-mentioned returned from the

Exhaustion Centre with a certificate that he was fit for duty. According to my observation, he is also completely healthy and fit for duty and is only simulating illness to thereby evade any work, service and serving of sentence. In view of the above, I would like to clarify that if the doctor considers him unfit, I ask for the appointment of a medical commission to examine him'. After studying other patients of the same unit, it occurred to me that perhaps the attitude of the Commander of this unit is not of the right standard. Having meticulously collected all the material, I went to the direct superior of this commander on 24/09/45 and presented to him the data in my possession. I pointed out at the end that I did not have the full possibility to identify this data with the actual state in the unit. However, I ask you to acknowledge them for what they are, for possible use in investigating the substance of the facts in the unit.

8. Psychosomatic approach

Apart from sedatives, sleeping pills and tonics, special importance is attached to the psychosomatic approach to the treatment of patients. Psychosomatic medicine is based on taking into account the role of the emotional factor (emotions) as a causal, co-causal or coexisting factor when analysing disease states. I had the opportunity to learn the essence of this direction by studying two fundamental American works in this field, published in 1945, namely: Weiss and English – 'Psychosomatic Medicine' and Flanders Dunbar – 'Psychosomatic Diagnosis'. The patient should simply be allowed to talk, if necessary assisted only by the most thorough questions. In the course of such an examination, the emotional factors behind the nervousness are revealed. Giving the patient a chance to speak at length and to explain to him the mechanism of the disease often brightens the patient's mental horizon and disarms his anxious suspicions, fears and complexes, which is healing in itself if the psychiatrist's conversation with the patient is based on mutual trust. Psychosomatic medicine in the full sense of the word can only be practised in large hospitals, which possess the expertise of all medical specialities and all the auxiliary research methods. The Exhaustion Centre, due to the fact that it is situated either at the Medical Corps General Centres or at a single Field Evacuation Hospital, does not have these methods at its disposal, therefore in the work of the Exhaustion Centre we can only speak of a psychosomatic approach. Psychosomatic examination and treatment is a kind of shortened psychoanalysis, although in the course of time it must develop, in more difficult cases, into a full psychoanalysis in the Freudian sense, where it is necessary to uncover complexes hidden in the dark

spaces of the subconscious and to bring them out into the 'sunlight' of the patient's consciousness. I do not need to emphasize that this work consumes a lot of time, but I must stress that the present and the near future herald the era of psychosomatic medicine and just as, in principle, every doctor must have the knowledge of minor surgery, while major surgery rests in the hands of masters of this art, so every doctor must and will have, regardless of specialty, the knowledge of minor psychosomatic medicine, while its full scope will remain in the hands of qualified specialists. I will illustrate the psychosomatic approach for the patients on two cases.

Case 1. Medical history: L. 439. Cannoneer L.K., born in 1910, railway worker, married. He suspects himself of venereal disease and cancer of the left lower limb (he has a thickening from varicose veins on this limb). He also feels resentment towards doctors for neglecting his illness and for saying that it is just his nerves. 'It's not enough for me, because I am getting sicker'. He came to the army from the German army. He feels well in his unit. So far, he has not been ill, he completed 7 years of primary school and studied well. Height 174, strong build, good nutrition, no palpable changes in internal organs or nervous system. Mixed mental type, with quite strong traits of inborn intelligence and right approach to his duties. Longer conversations about his life history allowed us to conclude that in general until May 1945 he had always felt well, except that he was always balanced, religious, relatively calm, with unstable emotionality. In May 1945, after abstinence since the beginning of the war, caused among other things by fear of venereal diseases, he had sexual intercourse without a condom after drinking alcohol. Since then he has been convinced, despite his doctors' denials, that he has a venereal disease and two weeks ago he discovered that there was probably some cancer growing on his left lower limb. He has moral scruples, justifying himself partly by the fact of having consumed alcohol. I began treatment by stating that I believed the patient was really suffering. I then asked him if he really wanted to be cured. To this he immediately replied 'yes'. So he should be indifferent to the method of treatment, as he did not know anything about it. Slowly and patiently I explained his objective condition and firmly denied the possibility of him contracting a venereal disease, as it was contradicted by all the tests, including the Kann negative reaction. His actual suffering was caused by emotions and consisted in associating any bodily sensations and minor ailments with the alleged venereal disease, which, together with his emotionality, led to the intensification of his symptoms. This way of argumentation, repeated

several times, after a few days drenched the patient's consciousness. The patient became more cheerful and considered the argumentation to be valid. He is currently on holiday in Como. At the end of his leave in mid-December, he is expected to report for a check-up at the Centre.

Case 2. Medical history: L. 411: Private L.N., arrived on 13/11/45, farmer, married, born in 1906, diagnosis of hysterical paralysis of the right upper limb. Height 170, athletic build, pulse 72, on the part of the nervous system – tremor of eyelids and fingers. Main complaints of the patient: the power in his right hand has been gone for several days, and he is terrified by it. He has had no illnesses so far. His father is a farmer, his family is healthy, he does not abuse alcohol. Mixed mental type with low intelligence and unstable emotionality. Sometimes his throat closes and he cannot speak when he gets emotional. In view of clear functional signs of the disease I told the patient that his illness could be cured, he just had to undergo the treatment with confidence. Such patients, who are very suggestive of what is happening in their environment, find it difficult to improve if they are not allowed to come out of their impasse with prestige towards their environment. For this reason, I declared the following to the patient: tomorrow morning I will give you an injection in your arm in several places, after which you will regain power, only then you will have to do gymnastics with your arm for two days according to the instructions given by me or your boss. Indeed, on the second day I began a kind of ceremony, first washing, then taking the syringe out of the sterilizer for a long time, then, after disinfecting the skin, I made five slow punctures in the skin of the limb with a sterilized needle, pretending to inject the healing fluid, which was not in the syringe at all. After the last puncture, I ordered the patient to raise his arm immediately, which he did. Further treatment, in the form of arm gymnastics twice a day, 15 minutes each, relieved the patient's mental attitude. In conclusion, I advised him not to worry about bodily sensations when he was worried or moved, because with his disposition it was easy for him to contract an illness that he himself had already had or had seen in others, out of fear, as if to justify himself to the world.

9. The approach from the perspective of the social self

Modern psychology and psychopathology consider the psychic life of man (Mc Dougall) not as formerly by tracing the separate parts of the individual psyche, but by studying his psychic life as an individual in society and the life of society in the individual. The importance of emotion in disease states, touched upon in the

previous section, is intensified and increased when the emotional states are connected with the closer content of a man's self. A person's mental health exists only when the threads that he grows into society and which grow into him from society are strong and thick enough and do not break, causing various disturbances in the social self in the form of conflicts, complexes and various illnesses. Today's psychological knowledge strives to know these bindings of the social self. A good psychological atmosphere in a unit can only exist when authorised eyes, armed with the wisdom of life and the necessary knowledge of psychic life, are constantly and continuously able to assess and notice all the more serious grumblings and desires of the soldier's unsatisfied self. Although in order to satisfy this man's self in the present day many changes would have to take place in the general relations of the world, and many of our desires are for the time being satisfied by the hope of a better future, it is certainly achievable to make such an effort so that the man entrusted to our care has at least that support which is called understanding and noticing his desires and pains. A soldier who feels a systematic insight and a kind eye of a commander who sets an example, must feel confident and good.

10. Reports and statements to superiors, written instructions and lectures

In addition to monthly reports on the movement of patients, the Corps Psychiatrist shall submit to the Chief of Health Services 3-monthly reports on the mental state of soldiers with observations and conclusions. Forensic reports, analyses of suicide cases, lectures in the psychology department make up the entire preventive work of the Psychiatrist, the main points of which have been discussed above. Although it is beyond the scope of this paper, which is intended to provide an insight into the prevention of mental illness at Corps level, to examine the conclusions of this work in detail, I consider it my duty at least to mention it in general terms. The following issues come to the fore:

- 1) The issue of a non-personal approach to the issues of everyday life and the consequent application of the principles proclaimed by those who proclaim them.
- 2) The issue of deepening the commanders' knowledge of human psychology, especially social psychology, which will allow for a higher understanding of the soldier's psyche.
- 3) The issue of combating alcoholism. Alcoholism takes the second place among the diseases diagnosed in the patients of the Exhaustion Centre, with 104 cases (the first place is taken

by neuroses with 187 cases). The analysis of the cases of alcoholism allows us to conclude that the knowledge of the harmfulness of alcohol is very low and that in the present conditions the issue of alcoholism is growing and is becoming alarming. Who is it primarily up to combat alcoholism if not doctors? The Technical Instruction of the Chief of Health Service, developed by me to facilitate the work of Unit Physicians in raising awareness, deals precisely with the most important aspects of the issue of alcoholism, as its title says. On this occasion, I have the honour to call for the cooperation of all doctors in this field. I would consider it highly advisable at this time to establish an anti-alcohol association. The issue of alcoholism in the Corps is inextricably linked with the issue of the treatment of alcoholics and the issue of further care for alcoholics and psychopaths released from the army. These matters have yet to be resolved.

- 4) The complicated sexual issue.
- 5) The issues of the psychology of collective life.

In conclusion, the Corps Psychiatrist still has many tasks to perform in the field of prevention of mental illness. The existence of the Exhaustion Centre in the II Corps, which cultivates a preventive approach to the issues of psychology and psychopathology, is a useful development and a step forward towards providing care for the mental health of soldiers at a modern level. I do not consider it advisable to combine this kind of work with a purely therapeutic approach, as is the case in hospitals, because preventive work requires extensive studies in psychology and psychopathology, while hospital work requires the doctor to focus his efforts mainly on psychiatry. I therefore believe that an institution of this kind, such as the Exhaustion Centre, should be maintained in its present capacity.

Literature

1. Sokolowski T, ed. Pamiętnik Zjazdu Polskich Lekarzy Wojskowych w Bolonii, 17-20.12.1945 r. 476 Sekcja Wydawnicza 2 Korpusu Polskiego, Bari 1946. Main Medical Library in Warsaw, Old Book Department, ref. 50701
2. Świder K. Zapobieganie chorobom psychicznym w Korpusie. Ibidem 121-136

Unsung Heroes of a Tragic Generation

Nieopiewani bohaterowie tragicznego pokolenia

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Abstract This is an expanded version of text presented during II International Conference of the Association of Polish Physicians in Chicago on 09/30/2019 as a commemoration of the 80th anniversary of the beginning of WWII and the 75th anniversary of the Warsaw Uprising [1]. The author, a son of Polish physicians, professor emeritus of Columbia College Chicago, shows - using his parents' biographies as examples - the fight for humanity itself and for the humanistic values of the medical profession under both Nazi and communist totalitarian rule. He described the way of life of his father – a Polish commissioned military officer, a psychiatrist, prisoner of Soviet labour camps, participant of the Battle of Monte Cassino, organizer of programs of psychiatric care for Polish soldiers and veterans in Italy, England and the United States. Likewise he described the life of his mother, a paediatrician working for The Boudouin House in Warsaw, who risked her own life to rescue Jewish children from the Holocaust. Forced to leave Warsaw, she and her 6-year-old daughter illegally crossed the borders of several countries to unite in Verona, Italy with her husband. Sharing a soldier's life with him, she placed care for their expanding family above her own job as a physician. The publication contains copies of documents e.g. discovered by the author in Russia at the time of making his documentary film 'Children in Exile' about the fate of Polish children sent to Soviet labour camps.

Key words: German occupation of Poland, 1939-1945, Polish Military Forces in the West, Polish prisoners of Soviet labour camps, Polish psychiatrists

Streszczenie Praca jest rozszerzonym zapisem wykładu wygłoszonego podczas II Międzynarodowej Konferencji Związku Lekarzy Polskich w Chicago pt. „Patriotyzm. Dziedzictwo. Medycyna”, zorganizowanej 30.09.2019 r. z okazji 80. rocznicy wybuchu II wojny światowej i 75. rocznicy Powstania Warszawskiego [1]. Autor, syn polskiego małżeństwa lekarskiego, emerytowany profesor Columbia College Chicago, na przykładzie biografii swoich rodziców przedstawił walkę o ocalenie człowieczeństwa i humanistycznych wartości zawodu lekarza w warunkach nazistowskiego i komunistycznego totalitaryzmu. Opisał drogę życiową ojca - oficera wojska polskiego, psychiatry, więźnia sowieckich łagrów, uczestnika bitwy o Monte Cassino, organizatora pomocy psychiatrycznej dla polskich żołnierzy i weteranów wojennych we Włoszech oraz w Anglii i Stanach Zjednoczonych. Podobnie opisał drogę życiową matki - lekarza pediatry w Domu Boudouina w Warszawie, która z narażeniem własnego życia ratowała żydowskie dzieci przed zagładą. Zmuszona do opuszczenia stolicy, wraz z 6-letnią córką nielegalnie przekroczyła kilka granic, by we Włoszech, w Weronie, połączyć się z mężem. Dzielać jego żołnierski los, troskę o powiększającą się rodzinę postawiła ponad własną pracę zawodową lekarza. Tekst uzupełniają kopie dokumentów, m.in. odkrytych przez autora w Rosji podczas realizacji filmu „Children in Exile” o losie polskich dzieci zesłanych do sowieckich łagrów.

Słowa kluczowe: okupacja niemiecka w Polsce 1939-1945, polscy więźniowie sowieckich łagrów, Polskie Siły Zbrojne na Zachodzie, psychiatrzy polscy

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My name is Christopher (Chris) Swider, in Polish Krzysztof Świder. I was a full professor and am currently professor emeritus at Columbia College Chicago. However, I do not consider myself a scientist or an intellectual, I am just a film maker - please take that into consideration.

I was asked to talk about my parents, who were Polish doctors during World War II. My mother, Maria, was a paediatrician in Warsaw until the end of the Warsaw Uprising. My father, Konstanty, was a professional officer in the medical corps of the Polish Army, a psychiatrist. Later on during World War II he served as a physician in the Polish II Corps, Anders army [2].



Figure 1. Cpt. Konstanty Świder MD, PhD with his mother Franciszka, sister Aniela and brother Janek, 1938

Rycina 1. Kpt. dr med. Konstanty Świder z matką Franciszką, siostrą Aniela i bratem Janem, 1938 r.

His father came from a peasant family, from the village of Czernichów near Cracow. He was an exceptionally gifted child, passing two grades of primary school in one year. He attracted the attention of people in his neighbourhood, who helped to ensure that this gifted child went to secondary school. He was sent to Cracow, to a gymnasium which, under various names, has been operating since 1588, now known as the Bartłomiej Nowodworski Secondary School. Prominent graduates of this school included King Jan III Sobieski and his brother Marek, Cardinal Jan Sapieha, General Józef Bem, painter Jan Matejko, playwright Stanisław Wyspiański, writer Józef Conrad Korzeniowski, psychiatrist Antoni Kępiński and many others [3].

During his first year at secondary school his father died. He had to cope on his own. He supported himself by tutoring other students. The father of one of them, a general in the Polish army, encouraged him to take the entrance exam to the military medical school in Warsaw. Similar to the American 'affirmative action' program, this was a program aimed at the underprivileged, giving poor high school students a chance to obtain a higher education. My father was accepted and received a government scholarship providing free living and accommodation, as well as free education in two professions – officer and doctor. He received his medical education at a civilian university - the Faculty of Medicine at the University of Warsaw, and his officer and military-medical education at a military university – the School of Sanitary Cadets. In return, scholarship holders were required to serve in the army for twice as long as their studies.

My father successfully completed both studies and defended his thesis for the degree of Doctor of Medicine at Warsaw University. He specialised in neurology and psychiatry. The military authorities sent him to serve in a military unit and later to the Air Force Medical Research Institute [5]. There he met many pilots who a few years later took part in the Battle of Britain, among them my mother's distant cousin, Jan (Johnny) Zumbach, a fighter ace and a very colourful character, author of the book 'On wings of war: My life as a pilot adventurer' (Fig. 1) [6].

At medical school my father met Maria Baranowska, daughter of the historian Ignacy Baranowski [7]. Against the wishes of her family, Maria and my father married in 1936.

When war broke out on 1 September 1939, my father received orders to leave Warsaw and head east. The Polish army was making a strategic withdrawal manoeuvre in anticipation of the opening of a second front in the west. Both he and my mother, with a small child (my sister Anna) and my aunt Aniela, who lived with them, made it to Lwów (now the city of Lviv in Ukraine). While they were there, the Soviets began their invasion of Poland on 17 September [8].

In Lviv my parents lived for some time with a friend of my family in a flat full of refugees. They slept under the piano. Shortly afterwards my father tried to get through to the Polish military units formed in France, but he was arrested by the NKVD (later KGB) on the then border with Romania (Fig. 2.-3).



Figure 2. Dr. Konstanty Świder in Soviet captivity, 1939-1941: photograph in NKVD documents
Rycina 2. Dr Konstanty Świder w sowieckiej niewoli, 1939-1941: fotografia w aktach NKWD



Figure 3. Dr. Konstanty Świder in Soviet captivity, 1939-1941: court order for his arrest, 11/12/1939
Rycina 3. Dr Konstanty Świder w sowieckiej niewoli, 1939-1941: postanowienie o aresztowaniu, 12.11.1939 r.

Initially he was kept in a prison in the Polish town of Stryj, where my mother could still visit him. Later he was transferred to other prisons, including Charków, Starobielsk and Wołogda, finally, he was sent to the Uch-izm Lag complex in the Komi Republic. My father was declared a dangerous social component (apastny) and sentenced (Fig. 4.). He received an extremely short sentence of three years. While in Russia, I heard a joke about a conversation between prisoners of a labour camp: “The first prisoner asked the other what he was being held for and for how long. The second prisoner replied: for nothing, for twenty years. The first one said: you’re lying, for nothing you would only get ten”. I can only assume that his short sentence was influenced by his peasant origin: the Russians, just as now, were playing a far-sighted game, anticipating that they would need people to manage occupied Poland.

In Uchta he initially worked in logging as a lumberjack (lespoyal). The life expectancy of those doing this work under those conditions was on average 18 months. They were only allowed to stop working when the outside temperature dropped below minus 40 °C. To survive you had to have a job indoors. When I was in Uchta, working on my film about children imprisoned in the camps ‘Children in Exile’ [9,10], I interviewed a man called Kirny, he had cut off several fingers on his hand to become crippled and no longer eligible for outside work. He became a coachman so he could spend part of his time somewhere inside, which enabled him to survive. He was imprisoned in 1936 and released in 1956. His term of imprisonment was extended by an additional six months because, by

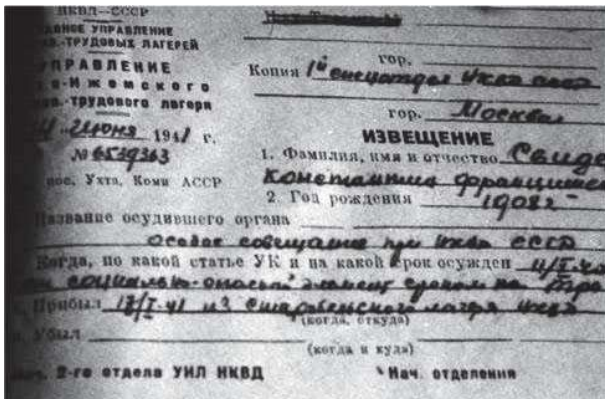


Figure 4. Dr. Konstanty Świder in Soviet captivity, 1939-1941: transfer from Starobielsk labour camp to Uchta labour camp, 01/17/1941
Rycina 4. Dr Konstanty Świder w sowieckiej niewoli, 1939-1941: przeniesienie z lagru w Starobielsku do lagru w Uchcie, 17.01.1941 r.



Figure 5. Dr. Konstanty Świder in Soviet captivity, 1939-1941: "amnesty" document and order to report in Buzuluk, 09/21/1941
Rycina 5. Dr Konstanty Świder w sowieckiej niewoli, 1939-1941 zawiadomienie o „amnestii” i rozkaz stawienia się w Buzuluku, 21.09.1941 r.

cutting off his own fingers, his productive capacity had been lowered from that which was expected of a Soviet citizen.

I have no idea how my father did it, but he started working as a psychiatrist. The main task of a psychiatrist working in such exceptional circumstances was probably to determine whether the patient was mentally ill or whether he was pretending to be ill in order to get into hospital.

At one of these places my father lived in a shared barrack with Alexander Swanidze [11], a close friend of Stalin's and brother of his first wife. Swanidze, a Georgian like Stalin, was an erudite man, deputy chairman of Gosbank, the main Soviet bank. He was arrested on Stalin's orders in 1937 and executed in 1941, shortly after the German invasion of the USSR. His father was present when NKVD officers came to take him away. Swanidze was fully aware of what awaited him, and he grabbed all his personal belongings and scattered them across the beds of his fellow prisoners. One of these items was his long leather coat; such coats in the Soviet Union were worn by government officials and other influential people.

Such was my father's fate until the Nazi invasion of the Soviet Union on 22 June 1941, when all international agreements fell apart. Allies became enemies. Enemies became allies. On 30 June, a week later, there was a huge change in the situation of Poles in the Soviet Union. The Sikorski-Mayski Agreement was concluded [12].

Władysław Sikorski was Prime Minister of the Polish Government in Exile in London, Ivan Mayski was Ambassador of the USSR in Great Britain. As a result of this agreement, hundreds of thousands of

Poles, who had been exiled or imprisoned, found themselves in the USSR and were suddenly 'amnestied': released from camps, prisons, POW camps and places of exile - released to freedom, the kind of 'freedom' to which the inhabitants of the Soviet Union were entitled.

One of those amnestied was my father (Fig. 5.). With my mind's eye I see him during those days: in a forced labour camp in the immediate vicinity of the Arctic Circle, in a foreign country at war, in a state of complete chaos, in uncertainty about what to do next. The trains were overloaded, full of refugees going east and soldiers going west to the front. When the first train carrying Polish prisoners from Uchta to the south was ready, someone from the Russians gave a secret warning not to take it. This posed a truly dramatic decision for the Poles a. Maybe this is another NKVD trick? Or maybe there would be no other train? What then? My father decided not to go, he decided to wait for the next train. The people on the first train disappeared without trace.

My father finally arrived in the south of the country, to the European part of the USSR near the Caspian Sea, where the future Polish II Corps, Anders Army, was being formed in Buzuluk, Tockoye and in the village of Tatishchevo. It was not long before my father was once again working as a doctor, this time at an infectious disease treatment facility for freed Polish soldiers and their families (Fig. 6.-8).

In 1942, with Stalin's consent, Anders Army left the 'inhuman land' plagued at that time of the war by a huge supply disaster. My father found himself with the troops first in Iran (Persia) (Fig. 9.), then Iraq (Fig. 10.), Palestine, Egypt (Fig. 11.) and finally Italy. In Italy he



Figure 6. Cpt. Konstancy Świder MD, PhD, in the Polish Army in the Soviet Union: as the physician of the 6th Medical Battalion, in Tockoye, 1941

Rycina 6. Kpt. dr med. Konstancy Świder w Polskiej Armii w ZSRR: jako lekarz 6. Batalionu Sanitarnego w Tockoje, 1941 r.

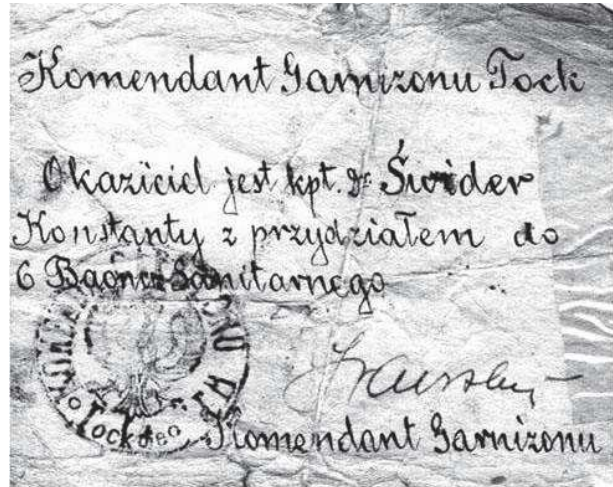


Figure 7. Cpt. Konstancy Świder MD, PhD in the Polish Army in USSR: I.D. document

Rycina 7. Kpt. dr med. Konstancy Świder w Polskiej Armii w ZSRR: dowód tożsamości



Figure 8. Cpt. Konstancy Świder MD, PhD, in the Polish Army in USSR: Tockoye, 1941

Rycina 8. Kpt. dr med. Konstancy Świder w Polskiej Armii w ZSRR: Tockoje, 1941 r.

took part in the Battle of Monte Cassino. He was then deputy chief of health in his division. Italy was also the country where he was reunited with my mother, who had arrived there with their several-year-old daughter after illegally crossing several European national borders. His last place of service was England, where demobilised Polish troops were transferred. There he worked at a facility caring for soldiers who had become psychiatric victims of the war [13].

At the end I will now go back to the moment when my father, after crossing the Soviet Union, arrived in Tockoye and reported for military service. His old friend did not recognise him: in torn clothes, with his feet wrapped in rags, swollen from hunger. Hanging from his neck was a pair of second-hand, but in good condition, expensive, hand-sewn shoes. One of his fellow prisoners had given them to him when he was on his deathbed. For the rest of his life, my father wore

these shoes whenever he needed luck. He also wore them when he took his certification and specialisation exams in the United States, which entitled him to practice medicine and work as a psychiatric specialist. We buried him in those shoes. He was a capable, hard-working, extremely persistent, conscientious doctor and professional officer. And he was always on the side of good. He died on 13 March 1965, too early.

In December 1939 my mother (Fig. 12.) realised that after my father's arrest her chances of survival in Soviet-occupied Lviv were slim, and that she should get through to her family in Warsaw. She somehow managed to find smugglers who took her across the 'green border' with her child and sister-in-law. This risky crossing would have meant being sent to Siberia if she had been caught.



Figure 9. Cpt. Konstanty Świder MD, PhD, in the Polish Army on the East: Iran, 1942

Rycina 9. Kpt. dr med. Konstanty Świder w Polskiej Armii na Wschodzie: Iran, 1942 r.



Figure 10. Cpt. Konstanty Świder MD, PhD, in the Polish Army on the East: Iraq, 1942

Rycina 10. Kpt. dr med. Konstanty Świder w Polskiej Armii na Wschodzie: Irak, 1942 r.



Figure 11. Cpt. Konstanty Świder MD, PhD, in the 2nd Polish Corps in Egypt, 1943

Rycina 11. Kpt. dr med. Konstanty Świder w 2. Korpusie Polskim w Egipcie, 1943 r.



Figure 12. Documents of Dr. Maria Józefa Świder, 1929-1944: portrait photograph [14]

Rycina 12. Dokumenty dr Marii Józefy Świder z lat 1938-1944: fotografia portretowa [14]

The Germans closed all universities and secondary schools in occupied Poland. The Poles, brought up in a tradition of resistance and defiance, immediately created an underground system of schools and universities. My mother passed her final two subjects at the clandestine Faculty of Medicine at Warsaw University during the occupation (Fig. 13) [14].

My sister, Anna, was born before the war in 1938. My mother had to take care of her in those difficult years, in a country occupied and torn in two halves, but she managed to cope. She found work as a paediatrician (Fig. 14.) at a shelter for young children known as Baudouin House (Fig. 15.), which systematically took in and hid Jewish children [15]. The boys were dressed in pink dresses to dismiss the possibility of discovering that they were circumcised. It is important to remember that this was not the Netherlands: in German-occupied Poland hiding Jews was a crime punishable by death. My mother also worked there during the Warsaw Uprising in 1944. When SS soldiers came to empty this shelter, they



Figure 13. Documents of Dr. Maria Józefa Świder, 1929-1944: M.D. diploma [14]
 Rycina 13. Dokumenty dr Marii Józefy Świder z lat 1938-1944: dyplom lekarza [14]

intended to take only the staff out of the building, leaving the children behind. Knowing that the children would be murdered, the crew refused to leave the building. For some reason this time a miracle happened, the resistance was successful, and finally the Germans removed both the staff and the children.

When my mother told me about her experiences she never presented herself as a heroine. She was one of the most humble people I have ever known. Only once in my life did I notice her boasting, when she said, with a gleam in her eyes, that she had illegally crossed national borders seven times. After the war she and my 6-year-old sister left Poland illegally, hidden in a column of UNRRA trucks returning without cargo after bringing food, clothing and medical supplies sent to Poland under the Marshall Plan. The escape was organised by an enterprising individual, John Brown, a murderer, an escapee from Auschwitz, claiming to be Australian. While crossing the Czechoslovakian border into Austria, the convoy was fired upon by border guards, but they managed to escape. They reached Italy, where, after a six-year



Figure 14. Documents of Dr. Maria Józefa Świder, 1929-1944: Gesundheitskammere registration questionnaire [14]
 Rycina 14. Dokumenty dr Marii Józefy Świder z lat 1938-1944: kwestionariusz rejestracyjny Gesundheitskammere [14]

separation, my mother reunited with my father in romantic circumstances in Verona town square – the setting for Romeo and Juliet.

Polish troops from Italy were transported to England, where in 1947 my brother Bogdan was born, and in 1950 I was born. In 1951 our family moved to the United States. Nothing about what was happening then was easy. In order to raise her three difficult children, my mother had to stop working as a doctor, which she never regretted. Although she did not consider herself as such, she was an intelligent person, with astonishing strength both mentally and physically. She was a small, almost inexhaustible charge of inner power. She was also very warm and feminine. She knew how to tell funny stories, and in doing so showed a natural ability to perceive, understand and apply comedy, to manoeuvre comedic timing, to show the deeper meaning of comedy in its farcical or grotesque form. She would have been astonished if I had told her about this.



Figure 15. Documents of Dr. Maria Józefa Świder, 1929-1944: her workplace -the Baudouin House in Warsaw [15]

Rycina 15. Dokumenty dr Marii Józefy Świder z lat 1938-1944: miejsce pracy - Dom ks. Baudouina w Warszawie [15]

My mother, Maria Józefa Świder, died on 30 August 2013 at the age of 100. She did not live to see September, a month she disliked. She associated September with many tragic events, as well as a key date in her life: September 1, 1939, when Germany invaded Poland from the west, starting World War II. Seventeen days later, the Soviet Union, Hitler's ally, invaded from the east. My mother survived the Soviet Communist occupation and the German Nazi occupation, as well as the Soviet 'peaceful occupation' of Poland just after the war. She survived the deportation of her husband, my father, to Siberia. Her brother Bogdan was killed in September of the same year in the battle of Falenica [16]. Her brother-in-law was arrested and deported to Auschwitz. The husbands of her cousins were sent to other concentration camps because they were scientists and university professors. She lost many other extended family members and friends. All her Jewish high school classmates died in the Holocaust. Despite this, she was able to talk calmly about the people who went to the gas chambers or whose heads were cut off. She even once said to me, "In my generation we butchered each other". She never forgave those who started it all. She was a righteous, sensible and thoughtful woman, dedicated to others, who was put through very difficult situations where she knew how to make equally difficult decisions. All those who knew my mother, Maria née Baranowska Świder, 'Mrs Rysia', would agree with me that she will remain – just like my father – in our memories and in our hearts.

Literature

1. www.dziennikzwiązkowy.com/polenia/patriotyzm-dziedzictwo-medycyna-ii-miedzynarodowa-konferencja-zwiazku-lekarzy-polskich/
2. Korpus Polski. [www.pl.wikipedia.org/wiki/2_Korpus_Polski_\(PSZ\)](http://www.pl.wikipedia.org/wiki/2_Korpus_Polski_(PSZ))
3. Bartłomiej Nowodworski Secondary School in Cracow. www.pl.wikipedia.org/wiki/L_Lyceum_Og%C3%B3lnokszta%C5%82c%C4%85ce_im_Bart%C5%82omieja_Nowodworskiego_w_Krakowie
4. Sanitary Training Centre. www.pl.wikipedia.org/wiki/Centrum_Wyszkolenia_Sanitarnego
5. Ilnicki S. Lt. Col. Konstanty Świder MD, PhD (1908-1965), dedicated psychiatrist of the Polish Armed Forces in the West Mil. Phys., 2021; 99 (4): 191-198
6. Jan Zumbach. www.pl.wikipedia.org/wiki/Jan_Zumbach
7. Ignacy Tadeusz Baranowski. www.pl.wikipedia.org/wiki/Ignacy_Tadeusz_Baranowski
8. Aggression of the USSR against Poland on 17/09/1939. www.pl.wikipedia.org/wiki/Agresja_ZSRR_na_Polsk%C4%99
9. Jablonska J. Children in Exile: Recollections of Children Deported to the Soviet Gulag. *Cosmopolitan*, 2011; 3 (3) www.cosmopolitanreview.com/children-in-exile/
10. Christopher Swider. www.opus27productions.net/mainmenu.htm
11. Aleksandr Swanidze. www.pl.wikipedia.org/wiki/Aleksandr_Swanidze
12. Sikorski–Majski Agreement. www.pl.wikipedia.org/wiki/Uk%C5%82ad_Sikorski-Majski
13. Suchcitz A, ed. 5. Kresowa Dywizja Piechoty 1941–1947. *Zarys dziejów*. [5th Kresy Infantry Division 1941-1947. An outline of its history.] Widows, Orphans and Invalids Relief Fund of the 5th Kresy Infantry Division in Great Britain, London 2012
14. Special Collections GBL Files of the Warsaw-Białystok Medical Chamber, ref. PL1327110111
15. Father Baudouin Children's Home. www.baudouin.waw.pl/index.php?option=com_content&view=article&id=3&Itemid=103
16. Zapomniane życiorysy: Bogdan Baranowski. [Forgotten biographies: Bogdan Baranowski] www.wiadomosciasiedzkie.pl/news/154/n/669