REPORT FROM 53RD ANNUAL MEETING OF EUROPEAN SOCIETY FOR PAEDIATRIC NEPHROLOGY

53. doroczna Konferencja Europejskiego Towarzystwa Nefrologii Dziecięcej

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Streszczenie: Artykuł dotyczy sprawozdania z Konferencji ESPN, która odbyła się w Amsterdamie w 2021 r.

Abstract: The article presents the report on the ESPN Conference in Amsterdam in 2021.

Słowa kluczowe: Konferencja, Europejskie Towarzystwo Nefrologii Dziecięcej, choroby nerek.

Key words: Conference, ESPN, renal diseases.

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The 53rd Annual Conference of the European Society for Paediatric Nephrology (ESPN) was held in a hybrid format on 16–19 September 2021. Lectures and live presentations were held at the congress centre in Amsterdam, while many of them were presented in an online format due to the SARS-CoV-2 pandemic.

The conference was devoted to the broad issue of kidney and urinary tract diseases in the paediatric population. Lectures and reports were presented simultaneously in four rooms. Poster presentations were a separate category.

A large group of lectures was devoted to chronic and end-stage renal disease and methods of renal replacement therapy. New and interesting papers on kidney transplantation were presented. A very interesting lecture entitled "*Infection – the price of no rejection?*" was presented by professor Priya Verghese from Ann & Robert H. Lurie Children's Hospital in Chicago. The topic concerned the optimisation of immunosuppressive treatment, which is now so advanced that the problem of transplant rejection seems to be less than the problem of the development of bacterial and viral infections associated with this treatment.

The very interesting lecture "*Retarding progressive kidney failure – what paediatricians can learn from adult nephrologists*" was given by professor Jürgen Flöge from University Hospital in Aachen, Germany. According to the professor, the use of the highest possible doses of RAAS blockers that are tolerated by the patient or allowed by the drug manufacturer should be taken into account when planning nephroprotective therapy in children and adolescents. Only such treatment, according to the professor, may be beneficial in inhibiting the progression of chronic kidney disease.

Interesting reports concerned the problems of urinary tract defects. In the polemic entitled "*Has the term CAKUT outlived its usefulness?*", Adrian Woolf and Nine Knoers presented different approaches to the term CAKUT (*Congenital Anomalies of Kidney and Urinary Tract*), which has been used also in Poland for many years. Professor Woolf expressed the opinion that the term was imprecise and misleading for urologists planning surgical correction of defects, whereas Professor Knoers defended the terminology as useful in the genetic diagnostics of diagnosed abnormalities. The lecture "*Prenatal programming of the kidney*" by professor Michiel Schreuder from Radboud University in Nijmegen, the Netherlands, closed the block. The lecturer emphasised the importance of environmental factors in the development of birth defects and compared them with genetic factors.

In the block devoted to hypertension, Professor Joseph Flynn of Northern Illinois University in Chicago presented the lecture "*Latest in BP Assessment and HTN Management in Pediatrics*". The presentation included considerations of the difficulty of establishing norms for determining normal BP values in a paediatric population, which is usually not threatened by cardiovascular complications. Hence, it is difficult to correlate blood pressure values with the incidence of stroke or myocardial infarction. It is worth mentioning that in the United States the upper limit of normal blood pressure values for 13-year-olds is now 130/80 mmHg, which is far from the European norms based on percentile grids.

Many reports concerned also the problems of glomerulonephritis, treatment of systemic lupus and progress in the therapy of hemolytic uremic syndrome, especially its atypical forms.

As usual in recent years, much attention was paid to markers that could facilitate the diagnosis of kidney and urinary tract diseases. This problem was addressed, among others, in the lecture of Professor Pierre Ronco from Hôpital Tenon, Paris, *"Serum and podocyte markers of membranous nephropathy"*. The professor is well known in the world of nephrology, so I do not have to add that the lecture was both interesting and delivered in a wonderful style.

The lecture "*Draining the oedema: something old, something new, something for you*" by Professor Detlef Bockenhauer from GOSH Hospital in London was devoted to methods of oedema therapy in patients with hypo- and hyper/normovolemia. Professor Bockenhauer stressed the necessity to avoid intravenous infusions of albumin, reminding that, depending on the type of dehydration, such management may lead to the risk of pulmonary oedema on the one hand and deterioration of renal function on the other. He also presented the unreliability of the method of determining the extraction fraction (EF) of sodium in a urine portion as an aid in distinguishing the type of dehydration, using the examples of two of his patients, in whom the calculation gave similar results, although each was a model example of a different type of problem. He recommended that the evaluation should be guided rather by parameters such as pulse rate and blood pressure. Finally, he mentioned the usefulness of the old method of water immersion in the fight against refractory oedema. What is new, however, is the attempt to administer a selective, competitive vasopressin 2-receptor antagonist, tolvaptan, in the treatment of oedema associated with nephrotic syndrome.

Several presentations, such as the report "*GFR estimation in children and adolescents – what is the optimal approach?*" by Professor Hans Pottel from the University of Leuven, concerned new and improved methods of estimating the glomerular filtration rate (eGFR).

The block of reports on ciliopathy included presentation of the preliminary results of tolvaptan treatment in children with renal cystic fibrosis. So far, the drug has been administered to adult patients, so the trials on the treatment of children finally provided hope for progress in the therapy of this defect, for which management has so far consisted of proper hydration and observation of patients. The results are encouraging in terms of inhibiting the growth of cyst size and counteracting the decrease of the glomerular filtration rate. No serious side effects were observed.

Several interesting lectures were devoted to the issue of patients with a single functioning kidney. Conclusions from long-term observations concerned both children with renal agenesis and those who lost an organ or its function due to trauma or disease. The authors of the presented papers unanimously emphasised that patients with only one functioning kidney should be included in long-term follow-up, as this condition poses a threat to their health. An example of such a report is the multicentre study "*Kidney injury in a large cohort of children with solitary functioning kidney*". Its authors (Groen et al.) showed that as many as one third of 982 observed paediatric patients (mean age 15 years) developed features of chronic kidney injury such as: proteinuria, hypertension and decreased glomerular filtration rate.

One of the leading topics of the Conference was devoted to genetically determined rare diseases. Among them, due to the interests of my Nephrology Department, I took particular interest in the issues of primary oxaluria type I. This disease is a rare disorder of glyoxalate metabolism characterised by accumulation of oxalate deposits, initially in the urinary tract and later in the parenchymal organs. It results from a deficiency of glyoxalate aminotransferase (AGT). The clinical picture can lead from symptomatic nephrolithiasis to nephrocalcinosis and end-stage renal failure with systemic symptoms. Only in recent years, promising new drugs based on the iRNA technique have emerged. They are currently in clinical trials. An entire block of topics was devoted to these exciting issues. The first lecture "*Illuminating the patient journey for children with PH1. Challenges, outcomes and unmet needs in the management of PH*" was presented by Professor Justine Bacchetta from the University of Lyon. The next, "*Identifying and managing PH1 in children*" was held by Professor Rezan Topaloğlu from Hacettepe University in Turkey, while new treatments were discussed by Dr. Sander Garrelfs from Amsterdam in his presentation "*Clinical trial updates in PH1*". We also heard a polemic entitled "*iRNA for ALL children with PH1?*", where different points of view were presented by Professor Justine Bacchetta and Professor Shabbir Moocchala from the University of Singapore.

In the block of reports devoted to urinary tract infections, Dr Kjell Tullus from GOSH hospital in London

presented the interesting lecture "*Indications for antibiotic prophylaxis in 2021*". According to the views of recent years, the recommendation was to reduce the use of prophylactic antibiotic therapy as a method with low effectiveness that leads to increasing drug resistance. The presentation of Dr Kavruk from Turkey, "*Is a different follow-up procedure necessary for infants with first febrile urinary tract infection caused by non-E.coli and ESBL producing bacteria?*", questioned, in turn, the necessity of treating an atypical aetiology of infection as an indication to perform micturition cystography. Such a procedure is currently recommended in most studies and diagnostic charts. Finally, in "*Uromodulin and vesico-ureteral reflux. A genetic study*", Dr Silvio Maringhini, showed the association between the rs4293393 genotype and scar formation in the renal parenchyma following urinary tract infection in patients with vesicoureteral reflux.

The posters presented at the Conference included two works by authors from the Department of Paediatrics, Nephrology and Pediatric Allergology from the Military Institute of Medicine in Warsaw. The first, entitled "*The assessment of the usefulness of selected markers in the prognosis of chronic kidney disease in children*", prepared by Agata Będzichowska and Katarzyna Jobs, showed the possible practical usefulness of two tubular markers, NAG and NGAL, in detecting early stages of kidney damage in patients with kidney disease and hyperfiltration. The second work, "*Renal cysts and diabetes syndrome (RCAD) – case report*", prepared by Małgorzata Placzyńska and Katarzyna Jobs, was a case report of a rare disease associated with an HNF1β gene mutation. Moreover, Dr Łukasz Obrycki presented his paper, "*Renal length normative values in children aged 0-18 years – multicenter study*", co-authored by Małgorzata Placzyńska, Małgorzata Sopińska, Katarzyna Jobs and Bolesław Kalicki. This multicentre work aimed at creating norms of kidney length in children from our geographical area. The fact that the work was accepted for publication in *Pediatric Nephrology* indicates that the intention was achieved.

Due to the number of reports and the necessity to select those that could prove most useful in clinical practice, I unfortunately did not manage to listen to all of the interesting presentations. For example, Dr Laura Massella from Rome, was the author of "*Hypertension in cystic kidney diseases*", and Dr Paul Winyard from GOSH Hospital in London presented "*Prenatal detection of cystic kidney disease – what can we tell families?*". The title of the report "*Fighting against kidney diseases with small interfering RNA: opportunities and challenges*" by Professor Bin Yang from the University Hospital of Leicester also suggested that interesting and novel issues were raised. We can only hope that the organisers, as they announced, will at least partially make the materials from the Conference available on the Conference website.