analysis for adverse outcome with the aim to develop a model that could be utilised in both the tertiary and regional setting to identify neonates at risk of poor outcome.

Results: The scoring systems developed by Portman and Talati in this study, were not found to be highly predictive of outcome with maximum positive predictive values of 83.3% and 60.0% respectively. In our cohort, a model scoring hypoxic-ischaemic encephalopathy, number of organs damaged and need for extra cardiac massage were found to be better predictors of outcome with a positive predictive value of 90.0%.

Conclusion: The proposed scoring system was a better predictor of outcome in this cohort of near-term infants after PA than previously reported scoring systems proposed by Portman or Talati. This scoring is also applicable in the non-tertiary setting and should be validated in a prospective group of patients.

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FEBRILE URINARY TRACT INFECTION IN INFANTS. IS CYSTOURETHROGRAPHY NECESSARY?

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Background and aims: To investigate infants after a febrile urinary tract infection with imaging studies is a common practice. Recently, the tendency is to avoid doing a cystourethrography in this group of risk although vesicoureteral reflux is associated with recurrent UTI and renal scars.

Objective: To evaluate the efficacy of combined DMSA scan and renal ultrasound to predict VUR in infants after a first febrile UTI.

Methods: This prospective study includes 295 infants less than 2 years, 114 males (38.6%) and 181 females (61.4%). A renal US and a DMSA scan were performed after diagnosis, and a voiding cystourethrography 4 weeks later. We assessed sensibility, specificity, positive and negative predictive value, and estimated the odds ratio.

Results: Vesicoureteral reflux was diagnosed in 82 infants (27.7%). 64 of them were low grade (I, II) and 18 were high grade (III, IV, V). In those with low grade, 25% showed abnormal findings in renal US, and 57% in DMSA scan. In those with high grade, 78% showed pathological US, and 69.6% abnormal DMSA scan. Combining both studies, 86.9% of high grade VUR but only 64.4% of low grade VUR showed pathological findings. The odds ratio for high grade reflux was 3.68 (95% CI 0.98-13.87).

Conclusions: In infants presenting with a first febrile UTI, renal US and DMSA scan must be performed during acute illness. Cystourethrography would then be indicated when renal US, DMSA scan or both were pathological. However, the value of these imaging studies for predicting low grade reflux is limited.

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THE VNTR IL1RN GENE POLYMORPHISM IN POLISH CHILDREN WITH DIFFUSE MESANGIAL PROLIFERATION (DMP)

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Pathogenesis of several renal diseases is strongly connected with cytokines. The polymorphism of IL1RN gene exists in intron 2 and is caused by variable number of 86bp sequence repeats. In addition, previous studies confirmed the association of IL1RN*2 with inflammatory diseases, among them glomerulonephritis. Therefore it raises the question whether VNTR polymorphism of IL1RN gene determines the susceptibility to DMP and its clinical course.

The study group consisted of 56 children with DMP and 105 healthy children as controls. Genomic DNA was extracted from peripheral blood leukocytes. The IL1RN intron 2 VNTR polymorphism was determined by PCR technique with primers flanking the polymorphic region.

Significant differences in genotype ($p=0,032$) and allele ($p=0,045$) frequencies were observed between children with DMP and control group. The genotype distribution was as follows: $*1/*1$ - 48,2%, $*1/*2$ - 30,4%, $*1/*3$ - 3,6%, $*2/*2$ - 14,3%, $*3/*3$ - 1,8%, $*3/*4$ - 1,8% in DMP group and $*1/*1$ - 58,1%, $*1/*2$ - 36,2%, $*1/*3$ - 3,8%, $*2/*2$ - 1,9% in controls. The prevalence of alleles in children with DMP was: $*1$ - 65,2%, $*2$ - 29,4%, $*3$ - 4,5%, $*4$ - 1,9% while in control group: $*1$ - 78,1%, $*2$ - 20%, $*3$ - 1,9%. Additionally $IL1RN*2$ allele homozygosity showed eight fold higher risk for DMP (OR=8,58; 95%CI, 1,73 to 42,48; $p=0,008$). No association between $IL1RN$ genotypes and response to steroid therapy or frequency of relapses was observed in the study group.

Our results suggest that $IL1RN*2$ homozygosity predisposes to diffuse mesangial proliferation in Polish children.

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OUABAIN PROTECTS AGAINST SHIGA TOXIN INDUCED RENAL TUBULAR CELL APOPTOSIS

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Context: Though typical Hemolytic Uremic Syndrome - mainly caused by Shiga toxin (Stx) produced by *Escherichia coli* - is a major cause of acute renal failure in children, the available treatments remain symptomatic. The aim of our experimental study was to determine whether ouabain (OB) at non-inhibitive concentrations could decrease the shigatoxin-induced apoptotic level.

Methods: Experiments were performed in rat proximal tubule cells (RPTC) cultured with Stx 2-4ng/mL, and treated with OB 5-10 nM. Group comparison was measured with the Apoptotic index, DNA fragmentation, and Fluorescence activated cell sorter (FACS). Immunoprecipitation and immunostaining techniques were used to determine the pathway of the antiapoptotic effect of OB.

Results: Stx 3-4 ng/mL significantly increased the apoptotic index in comparison to the control group. OB 5 nM significantly decreased the apoptotic index

in RPTC exposed to Stx 3- 4 ng/mL (Apoptotic index %: Stx3 6.4 ± 3.2 versus Stx3+OB 1.5 ± 2.4 , $p=0.003$; Stx4 8.6 ± 8.9 vs. 2.1 ± 1.3 , $p<10^{-4}$). It also decreased the level of DNA. FACS analyses demonstrated that OB drastically protected RPTC from Stx cytotoxins. Furthermore, immunoprecipitation as well as specific immunostaining showed that OB's protective effect was mediated through the Na, K-ATPase /IP3R interaction and triggering NFkB activity.

Conclusion: Our results state that ouabain may be an interesting therapeutic agent to reduce kidney damage in children with HUS.

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A NOVEL ROLE FOR CD2AP IN NORMAL PODOCYTE DIFFERENTIATION

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Background: CD2AP is a multifunctional adaptor molecule, binding other key podocyte proteins within the slit-diaphragm complex.

Methods: The cellular phenotype of conditionally immortalized wild-type (WT) and CD2AP mutant podocytes was compared by light microscopy. Immunofluorescence and western blot was then used to examine the expression of characteristic podocyte markers nephrin, podocin, CD2AP, PAX2 WT1 as well as WTIP and mesenchymal markers fibronectin and α -SMA in CD2AP mutant podocytes. To investigate differences in localisation of WTIP further, nuclear and cytoplasmic fractions were isolated from each cell line and nuclear/cytoplasmic expression ratios compared.

Results: In contrast to WT podocytes, CD2AP mutant demonstrated spindle shaped fibroblast like morphology similar to WT1 mutant podocytes and were unable to form recognizable cell-cell contacts. Although nephrin, CD2AP, podocin and WT1 were expressed at comparable levels in both cell lines, mesenchymal markers fibronectin and α -SMA were significantly overexpressed in CD2AP mutants compared with WT. Western blot and immunofluorescence data showed that PAX-2 was also upregulated in CD2AP mutant cells in keeping with a WT1-related defect. Immunofluorescence staining confirmed that WTIP co-localized at the cell membrane in WT podocytes, whereas in mutant cells WTIP expression was primarily nuclear. This observation was confirmed by a significant increase