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

R. Vieux[1,2], E. Burlaka[2], L. Yang[2], D. Karpman[3], A. Aperia[2], X. Liu[2]

[1]Department of Neonatology, Maternite Regionale Universitaire, Nancy Cedex, France, [2]Department of Woman and Child Health, Karolinska Institutet, Astrid Lindgren Children´s Hospital, Stockholm, [3]Medicinska Fakulteten, Lunds University, Lunds, Sweden

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 antiapototic 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 (Apotptotic 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

R.M. Sarrab, A. Koziell, L. Ni, G. Welsh, M. Saleem

Academic Renal Unit, Bristol University, Bristol, UK

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. Immunoflourescence 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* mutatant 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 immunoflourescence 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