Purpose To evaluate the diagnostic performance and safety of intravesical administration of a second-generation ultrasound contrast-agent (UCA) for the diagnosis of vesico-ureteric reflux (VUR) in children.

Methods and materials 1350 children (587 boys/763 girls, mean-age 2.6y, range 15d-17y) with 2720 pelvi-ureter-units, underwent contrast-enhanced voiding urosonography (ceVUS) to rule out VUR and urethral pathology. A second-generation UCA (SonoVue®, Bracco, Milan) was administered intravesically through 5-8F feeding-tube at a dose of 0.5 ml/bladder filling. Possible adverse-events were monitored during the examination and followed-up for 7 days after the ceVUS by phone-calls. Urine analysis and culture were performed 3-5 d before ceVUS in all children and 24-48 h in any patient reported with adverse-events.

Results VUR was detected in 450/1350(33%) patients (162 boys/288 girls). This was in 653 pelvi-ureter-units (reflux-grade distribution: grade I = 1, grade II = 276, grade III = 266, grade IV = 100, grade V = 10). The urethra was normal in all children. Mean duration of examination was 14 ± 7 min, including urethral imaging. Minor adverse-events were reported in 45 (3.3%) children. These included dysuria (n = 39), abdominal pain (n = 2), increased frequency of micturition (n = 1), vomiting (n = 1), perineal irritation (n = 1), and urinary-tract-infection after ceVUS (n = 1). The onset of adverse-events were subacute in 92% and delayed in 8% and were self-limited non-requiring hospitalisation.

Conclusions There were no serious adverse-events with intravesical use of SonoVue®. Only a few minor adverse-events were reported during ceVUS most likely due to catheterization process. Thus ceVUS with intravesical administration of a second generation UCA (SonoVue®) for VUR and urethral pathology detection is a safe and reliable diagnostic procedure in children.
Objectives To define the target dose of Cisplatin that develops non-oliguric toxic acute kidney injury in piglets.

Methods A prospective experimental study was performed in 8 piglets (mean 10 kg). Three different intravenous doses of Cisplatin (2, 3 and 5 mg/kg) and two different periods of time between administration and evaluation (2 and 4 days) were studied. Urine and blood samples were collected.

Results Results are presented in Table 1. A dose of 2 mg/kg did not produce important alteration of renal function at any given time. A very severe oliguric AKI with extremely high hyperkalaemia was observed four days after a 3 mg/kg dose and 3 days after a 5 mg/kg dose. A dose of 3 mg/kg administrated 48 h before produced an important AKI without severe hyperkalaemia.

Conclusions A dose of 3 mg/kg of intravenous cisplatin produces non-oliguric AKI after 48 h in piglets. This dose and interval can be used for toxic paediatric animal models of AKI.

**PS-242** RITUXIMAB IN THE TREATMENT OF MINIMAL CHANGE DISEASE IN CHILDREN WITH NEPHROTIC SYNDROME

**XL Niu, S Hao, P Wang, GH Zhu, Y Wu, W Zhang, GM Guo, WY Huang, Rheumatology, Shanghai Children’s Hospital Shanghai Jiaotong University, Shanghai, China.**

Background and aims To explore the efficiency and side effects of rituximab in the treatment of minimal change disease (MCD) in children with steroid-dependent nephrotic syndrome (SDNS).

Methods From 2011.10 to 2014.4, children with MCD who hospitalised always relapsed although treated with steroid and one or more immunosuppressants. Thenthey were given rituximab 1 or 2 times (375 mg/m²).

Results Fifteen patients (male: female 7:8) with MCD, ageing from 4–17 years old (7.93 ± 3.26 years old) were followed up for 2–30 months (15.4 ± 9.86 months). After infusion of rituximab, the B cell was obviously decreased (CD20 < 1%, T = 110, PT = 4, P = 91, PT = 1, P Side effect: Only two patients got mildly uncomfortable in the infusion of rituximab but relieved with decreasing the rate of infusion.

Conclusion Rituximab has efficiency in treating children with MCD. It can help to reduce the dosage of steroids. And maybe one time of rituximab is enough for children with MCD. And there are no seriously side effects of rituximab.

**PS-244** ACETAZOLAMIDE TREATMENT FOR METABOLIC ALKALOSIS IN A PAEDIATRIC INTENSIVE CARE UNIT

**B Toledo, A Alcara, C Ambas, M Garcia, E Fernández, P Paredes, MJ Santiago, Pediatric Intensive Care Unit, Hospital General Universitario Gregorio Marañón, Madrid, Spain.**

Background and aims To investigate the value of urinary neutrophil gelatinase associated lipocalin (NGAL) kidney injury molecular-1 (KIM-1) and interleukin-18 (IL-18) in the diagnosis of acute kidney injury (AKI) following childhood cardiopulmonary bypass (CPB).

Methods 67 patients accepted CPB assigned to acute kidney injury group (group AKI) or non-acute kidney injury group (group non-AKI). Samples were taken regularly after CPB 30 min, 2 h, 4 h, 24 h, 48 h and 72 h.

Results The incidence of AKI was 34%, including 15 cases with Risk stage AKI, 4 cases with Injury stage AKI, 3 cases with Failure stage AKI, 1 cases with Loss stage AKI. Comparing with the non-AKI group, the levels of urinary NGAL/Cr was much higher than that of controls after CPB 24 h. The levels of urinary NGAL/Cr were higher than that of controls after CPB 48 h. The values for the AUC were determined for urine KIM-1 as 0.698 and 0.662 after CPB 24 h and 48 h. Comparing with the pre-operation, the levels of urinary IL-18/Cr were higher than that of controls after CPB 30 min. AKI group has a higher level than that of non-AKI group after CPB 4 h.

Conclusion In this study, our results identify that possibly urine NGAL, KIM-1 and IL-18 are more significative than Scr for early detection. However, the exact clinical value needs to be further elucidated.

**Poster symposium**

**Abstract PS-240 Table 1**

<table>
<thead>
<tr>
<th>Cisplatin dose (mg/kg)</th>
<th>Days after injection</th>
<th>Initial diuresis (ml/h)</th>
<th>Creatinine (mg/dL)</th>
<th>Urea (mg/dL)</th>
<th>Sodium (mmol/L)</th>
<th>Potassium (mmol/L)</th>
<th>Phosphate (mg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>1.0</td>
<td>46</td>
<td>140</td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>0.9</td>
<td>45</td>
<td>138</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3.6</td>
<td>174</td>
<td>138</td>
<td>4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1.5</td>
<td>142</td>
<td>135</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>4.2</td>
<td>209</td>
<td>132</td>
<td>5.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3.8</td>
<td>189</td>
<td>137</td>
<td>4.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>9.5</td>
<td>518</td>
<td>137</td>
<td>8.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>5.5</td>
<td>409</td>
<td>120</td>
<td>10.4</td>
<td></td>
<td>14.8</td>
</tr>
</tbody>
</table>

**PS-243** THE CLINICAL SIGNIFICANCE OF URINARY NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN, KIDNEY INJURY MOLECULAR-1 AND INTERLEUKIN-18 IN ACUTE KIDNEY INJURY AFTER CHILDHOOD RDIOPULMONARY BYPASS

**1 HL Liu, 1YL Shen, 1L Sun, 2XY Kuang, 2RF Zhang, 3Y Zhang, 2XB Li, 1WY Huang, 1Nephrology and Rheumatology, Shanghai Children’s Hospital Shanghai Jiaotong University, Shanghai, China; 2Cardiothoracic Surgery, Shanghai Children’s Hospital Shanghai Jiaotong University, Shanghai, China; 3Clinical Laboratories, Shanghai Children’s Hospital Shanghai Jiaotong University, Shanghai, China.**

Background and aims To investigate the value of urinary neutrophil gelatinase associated lipocalin (NGAL) kidney injury molecular-1 (KIM-1) and interleukin-18 (IL-18) in the diagnosis of acute kidney injury (AKI) following childhood cardiopulmonary bypass (CPB).

Methods 67 patients accepted CPB assigned to acute kidney injury group (group AKI) or non-acute kidney injury group (group non-AKI). Samples were taken regularly after CPB 30 min, 2 h, 4 h, 24 h, 48 h and 72 h.

Results The incidence of AKI was 34%, including 15 cases with Risk stage AKI, 4 cases with Injury stage AKI, 3 cases with Failure stage AKI, 1 cases with Loss stage AKI. Comparing with the non-AKI group, the levels of urinary NGAL/Cr was much higher than that of controls after CPB 24 h. The levels of urinary NGAL/Cr were higher than that of controls after CPB 48 h. The values for the AUC were determined for urine KIM-1 as 0.698 and 0.662 after CPB 24 h and 48 h. Comparing with the pre-operation, the levels of urinary IL-18/Cr were higher than that of controls after CPB 30 min. AKI group has a higher level than that of non-AKI group after CPB 4 h.

Conclusion In this study, our results identify that possibly urine NGAL, KIM-1 and IL-18 are more significative than Scr for early detection. However, the exact clinical value needs to be further elucidated.

**PS-244** ACETAZOLAMIDE TREATMENT FOR METABOLIC ALKALOSIS IN A PAEDIATRIC INTENSIVE CARE UNIT

**HJ Liu, 1YL Shen, 1L Sun, 1XY Kuang, 1RF Zhang, 2XB Li, 1WY Huang.**

Background and aims To explore the efficiency and side effects of acetazolamide in the treatment of minimal change disease (MCD) and interlleukin-18 in the treatment of minimal change disease (MCD). It can help to reduce the dosage of steroids. And maybe mildly uncomfortable in the infusion of rituximab but relieved within 2 and 4 days.

Methods A prospective experimental study was performed in 8 piglets (mean 10 kg). Three different intravenous doses of Cisplatin (2, 3 and 5 mg/kg) and two different periods of time between administration and evaluation (2 and 4 days) were studied. Urine and blood samples were collected.

Results Results are presented in Table 1. A dose of 2 mg/kg did not produce important alteration of renal function at any given time. A very severe oliguric AKI with extremely high hyperkalaemia was observed four days after a 3 mg/kg dose and 3 days after a 5 mg/kg dose. A dose of 3 mg/kg administrated 48 h before produced an important AKI without severe hyperkalaemia.

Conclusions A dose of 3 mg/kg of intravenous cisplatin produced non-oliguric AKI after 48 h in piglets. This dose and interval can be used for toxic paediatric animal models of AKI.

**PS-241** WITHDRAWN