Background and Aims Bronchopulmonary dysplasia (BPD) is a chronic lung disease associated with premature birth and early lung injury. The pathogenesis is multifactorial, including fluid and electrolytes balance that is dependent to renal development during the first weeks of life.

We previously found a correlation between renal development during the first weeks of life and urinary neutrophil gelatinase-associated lipocalin (UNGAL) at birth in very low birth weight infants (VLBW). The aim of this study was to examine the relationship between urinary (UNGAL) and serum NGAL (SNGAL) at birth and BPD.

Methods UNGAL and SNGAL were determined at birth in VLBW. BPD was defined as oxygen need at 36 gestational weeks (GA). Statistical analysis was performed with chi square.

Results 44 VLBW admitted at birth in our NICU were included in the study; 2 of them died during stay in NICU. 20/42 infants developed BPD: all were born at ≤ 29 week (GA) and 14 of them needed diuretics. High values of UNGAL (> 100 ng/ml) were observed more frequently among BPD treated with diuretics infants than in the other subjects (57% vs 28%, p = 0.04).

High levels of SNGAL (>150 ng/ml) were not significantly more frequent in VLBW with BPD.

Conclusions These preliminary data show that high UNGAL at birth is a marker of impaired renal development and fluid balance in preterm newborns, that determine increased lung water and consequently contribute to BPD development.
Abstract 606 Table 1

<table>
<thead>
<tr>
<th>Dose (mg/kg)</th>
<th>Median</th>
<th>Min - Max</th>
<th>Frequency (Hours)</th>
<th>Median</th>
<th>Min - Max</th>
<th>Total daily dose (mg/kg/24h)</th>
<th>Median</th>
<th>Min - Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furosemide</td>
<td>1</td>
<td>0.5–3</td>
<td>12</td>
<td>6–24</td>
<td>2</td>
<td>1–4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spironolactone</td>
<td>1</td>
<td>0.5–10</td>
<td>12</td>
<td>12–24</td>
<td>2</td>
<td>1–20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorothiazide</td>
<td>10</td>
<td>1–25</td>
<td>12</td>
<td>12–24</td>
<td>20</td>
<td>2–50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrochlorothiazide</td>
<td>15</td>
<td>10–20</td>
<td>12</td>
<td>12</td>
<td>30</td>
<td>20–40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Background Diuretics are used in premature babies with chronic lung disease despite minimal evidence. The aim of this study was to assess the use of diuretics in neonatal units in England.

Method An electronic survey using Survey Monkey was sent to 108 units in the Medicines for Children Research Network Neonatal Network.

Results There were 66 responses with usable data from 55 unique units. 20% had a protocol for use. 49% would consider starting diuretics after 5 weeks of age and half would start diuretics in situations such as being unable to wean ventilation, unable to extubate, unable to wean off CPAP, chronic lung disease and chronic lung disease in the presence of a PDA. 70% had no rule when to stop diuretics, 22% stopped off supplemental oxygen and 8% off CPAP.

48% use chlorothiazide plus spironolactone in babies who are fully fed and 84% prefer furosemide in babies requiring intravenous treatment.

Table 1 shows the variation in the doses within diuretics.

Conclusions There is wide heterogeneity in the use of diuretics in England. The majority use chlorothiazide plus spironolactone in babies who are fed and furosemide intravenously.

609 SPECIFICITY OF TUBERCULOSIS AND RESISTANCE OF THERAPY BETWEEN IMMIGRANTS AND BOSNIA-BORN CHILDREN

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