Differential Diagnosis of Polyuria-Polydipsia Syndrome with Copeptin

Polyuria-polydipsia syndrome (suspected diabetes insipidus)
- excessive fluid intake and excessive urine volume
- urine osmolality low, serum osmolality high

Baseline Copeptin (without prior fluid restriction)

- <21.4 pmol/L
  - Sodium <147 mmol/L
  - Fluid deprivation
    - Sodium after 5h still <147 mmol/L
    - 3% saline infusion
    - Until sodium ≥147 mmol/L
- ≥21.4 pmol/L

2nd Copeptin

- <4.9 pmol/L
  - Complete or partial central DI
    - 96% Sensitivity 94% Specificity
- ≥4.9 pmol/L
  - Primary polydipsia
    - 94% Sensitivity 98% Specificity
  - Nephrogenic DI
    - 100% Sensitivity 100% Specificity

Adapted from: Timper K et al., J Clin Endocrinol Metab 2015; 100(6): 2268-74
**Copeptin reference values in relation to plasma osmolality**

<table>
<thead>
<tr>
<th>Osmolality [mmol/kg]</th>
<th>Copeptin [pmol/L]</th>
</tr>
</thead>
<tbody>
<tr>
<td>270-280</td>
<td>0.81-11.6</td>
</tr>
<tr>
<td>281-285</td>
<td>1.0-13.7</td>
</tr>
<tr>
<td>286-290</td>
<td>1.5-15.3</td>
</tr>
<tr>
<td>291-295</td>
<td>2.3-24.5</td>
</tr>
<tr>
<td>296-300</td>
<td>2.4-28.2</td>
</tr>
</tbody>
</table>

*Sources: Balanescu S et al., J Clin Endocrinol Metab 2011; 96(4): 1046-52; Fenske W et al., J Clin Endocrinol Metab 2011; 96(5): 1506-15; Szinnai G et al., J Clin Endocrinol Metab 2007; 92(10): 3973-8*

**Fast, precise, and smart**

**Copeptin – the better vasopressin**

- Better correlation to plasma osmolality
- Highest diagnostic accuracy
- Confident decisions for differential diagnosis
- Optimized patient management
- Fewer blood-draws
- Reduced stress for patients
- Reduced burden of the water deprivation test

**Your options to replace vasopressin (AVP) assays with easy and precise Copeptin (CT-proAVP) assays**

- **B·R·A·H·M·S™ Copeptin proAVP KRYPTOR™** (Automated immunofluorescent assay)
- **B·R·A·H·M·S CT-proAVP LIA** (Immunoluminometric assay)

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