**Background**

- Multiple organ failure syndrome (MOFS) can occur in diabetic ketoacidosis (DKA).
- In DKA, rhabdomyolysis is thought to be secondary to the changes in electrolyte and glucose concentration across the muscle cell combined with the presence of insulin.
- These changes may lead to increased intracellular calcium which, in turn, can activate proteases and lead to muscle cell leakage.

**Objectives**

- A 6-year old female child had DKA and MOFS.

**Methods**

- We presented a case study of a child with DKA and MOFS, treated in Vietnam National Children’s Hospital (NCH).

**Results**

- A 6-year old female child had 1-week history of excessive thirst, polyuria, polydipsia, and weight loss.
- She was admitted to NCH on 23rd Dec 2015.
- In history:
  - D7: she had excessive thirst and urination, weight loss, and feeling fatigue.
  - D1: she felt more fatigue. In a local hospital, she was transfused 1000 ml NS. After that, she had multiple episodes of emesis, then she was lethargy with glucose level of 33.5 mmol/l. She was diagnosed of DKA and transferred to NCH.
- On admission to NCH, she had tachypnea, unconsciousness with Glasgow score of 5, pupils 3 mm, reflex to light, hypovolemic shock (tachycardia 147 pm, weak pulse, Refill 4 s, BP: 50/30 mmHg), severe dehydration (dry skin, extremely sunken eyes), no urine out put.
- Investigation: glucose lever was 32.2 mmol/l (max 64.5 on admission); metabolic acidosis with pH of 6.8; hypernatremia with sodium level of 162 mmol/l; ketonuria and glucosuria; HbA1C of 12.1%; low C-peptide of 0.001ng/ml; increased liver enzymes with GOT and GPT of 470 U/L and 188 U/L, respectively; renal failure with urea and creatinine of 27.9 mmol/l and 318 Mmol/l, respectively; rhabdomyolysis with CK of 29642 U/l; myoglobinuria.

**Table 1: Progression of investigation**

<table>
<thead>
<tr>
<th>Date</th>
<th>Glucose</th>
<th>GOT</th>
<th>GPT</th>
<th>Urea</th>
<th>Creatinin</th>
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<td>64.5</td>
<td>470.3</td>
<td>188.3</td>
<td>27.9</td>
<td>318.6</td>
</tr>
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<td>14.7</td>
<td>8259.2</td>
<td>3035.6</td>
<td>14.7</td>
<td>225.0</td>
</tr>
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<td>25/12</td>
<td>16.9</td>
<td>9181</td>
<td>3423</td>
<td>32.3</td>
<td>403.5</td>
</tr>
<tr>
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<td>821</td>
<td>4.4</td>
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<tr>
<td>31/12</td>
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<td>281.4</td>
<td>320.5</td>
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<tr>
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<td></td>
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<td>4.9</td>
<td>85.6</td>
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</table>

- Liver enzymes were normalized on 10th Jan 2016, 1 week later than renal function.
- DKA and MOFS were cured. Renal function and liver enzymes were recovered.
- She was discharged from hospital without neurogenic sequelae.

**Conclusions**

Hemodialysis is an appropriate treatment for a combination of DKA and MOFS.

**References**


**Conflicts of interest:** None declared;

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