EARLY DIAGNOSIS OF SEVERE ISRAELI SPOTTED FEVER

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1. INTRODUCTION

Israeli spotted fever (ISF) is caused by Rickettsia conorii Israeli spotted fever strain. In Portugal, it was first described for the first time in 1999.

2. CASE REPORT

July 2013
♀ 12 years-old
Rural area in the south of Portugal
Daily contact with dogs
No history of tick bites or eschar

D1
Fever, macular rash
Mild headache
Vomits, intense myalgia
Hematuria

D3
Hypoxia, hypotension
Oliguria, gastric intolerance

D4
Pediatric Intensive Care Unit
Vasopressor therapy D4-D10
NIV D4-D7
Doxycycline (D3-D10; 7d)
Ceftriaxone (D4-D18; 14d)
Flucloxacilin (D4-D18; 14d)
Clindamycin (D4-D18; 14d)

D11
Asymptomatic
Physiotherapy

D18
Discharge

12 hours after hospital admission, SEPTIC SHOCK with multiorgan dysfunction syndrome

Laboratory findings

<table>
<thead>
<tr>
<th></th>
<th>Admission (D3)</th>
<th>12 hours later</th>
<th>D5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin (g/dL)</td>
<td>11.3</td>
<td>10.6</td>
<td>10.7</td>
</tr>
<tr>
<td>White cell count (x10⁹/L)</td>
<td>3.540</td>
<td>2.200</td>
<td>8.600</td>
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<tr>
<td>Platelet count (x10⁹/L)</td>
<td>71</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>C-reactive protein (mg/dL)</td>
<td>14.8</td>
<td>19</td>
<td>24.2</td>
</tr>
<tr>
<td>PT/aPTT (seg)</td>
<td>14/39</td>
<td>15/43</td>
<td>12/35.2</td>
</tr>
<tr>
<td>Serum creatinine (mg/dL)</td>
<td>1.15</td>
<td>1.61</td>
<td>0.94</td>
</tr>
<tr>
<td>AST/ALT (U/L)</td>
<td>139/95</td>
<td>172/120</td>
<td>143/102</td>
</tr>
<tr>
<td>Alkaline phosphatate (U/L)</td>
<td>460</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Serum lactate</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blood, urine and CSF cultures negative
HIV, EBV, CMV, Enteroviruses, Mycoplasma pneumoniae, Coxiella burnetii, Leptospira were EXCLUDED

D4: Pleural effusion (transudate) and ascitis

✓ Serological diagnosis by Immunofluorescence:
Fourfold rise in IgM and IgG antibodies against spotted fever Rickettsia (four weeks interval):
1st sample negative; 2nd sample IgM >1024 and IgG>4096

✓ Molecular detection (PCR) and sequencing:
Identification R. conorii Israeli spotted fever strain

3. DISCUSSION

Severe cases of Israeli spotted fever have been increasingly reported, mostly in adults. In children, it is usually a mild disease. The mechanism by which ISF strain causes more severe illness remains to be determined.

The patient’s epidemiology and typical rash facilitated the early clinical diagnosis and prompt empirical treatment, which was probably crucial. The absence of an inoculation eschar should not delay the diagnosis.


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