INTRODUCTION

Toxic shock syndrome (TSS) is an acute life-threatening illness, mediated by toxins produced by some strains of bacteria, most commonly *Staphylococcus aureus* and *Streptococcus pyogenes*. It’s a relatively rare but severe disease, which is more common in children than in adults. Objectives: To describe and analyze clinical features, treatment and outcome of children with TSS.

METHODS

Retrospective chart review, between 2005 and 2016, of children admitted in a paediatric intensive care unit (PICU) with TSS (Centers for Disease Control case definition).

RESULTS

2005 – 2016

11 years

3943 Admitted Patients

TSS criteria’s = 11

8 *Streptococcus pyogenes*

3 *Staphylococcus aureus*

<table>
<thead>
<tr>
<th>Predisposing Factors</th>
<th>Ventilatory Support</th>
<th>Inotropic support</th>
<th>Antitoxin Therapies (n)</th>
<th>Complications (n)</th>
<th>PRISM I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Streptococcus pyogenes</strong> N= 8</td>
<td>✓ Varicella infection</td>
<td>✓ All patients add Hypotension</td>
<td>✓ Clindamycin (8)</td>
<td>✓ Septic Arthritis (2)</td>
<td>min 5 - max 33</td>
</tr>
</tbody>
</table>
Mean age: 4,8 years | No = 5 | Yes= 3 | intravenous immunoglobulin (3) | ✓ Necrotizing Fasciitis (1) |
6 Male | No = 2 | Yes= 7 | Steroids (3) | ✓ Pyomyositis (1) |
2 Female | ✓ Pneumonia | ✓ Fresh frozen plasma (3) | ✓ Pneumothorax (1) |
6 cases Confirmed | Yes= 1 | Yes= 3 | ✓ Empyema (1) | ✓ Guillan-Barré (1) |

| Staphylococcus aureus** N= 3 | ✓ Postoperative | ✓ Clindamycin (3) | ✓ Pneumatocele (1) | min 4 - max 13 |
Mean age: 5,1 years | Yes= 1 | Yes= 3 | ✓ Pneumothorax (1) | Mean 7,7 |
1 Male | ✓ Burns | ✓ Guillan-Barré (1) | ✓ | |
2 Female | ✓ Pneumonia H1N1 | ✓ | | |
2 cases Confirmed | Yes= 1 | Yes= 3 | ✓ | |

**Total**

7 male : 4 female

Median age 2 years

(min 9 months max 18 years)

n=4 mean 7,3 days

n=10 mean 10 days

Generalized rash n=11

Desquamation n=8

Surgical Intervention n=7

Mean = 11,7

<table>
<thead>
<tr>
<th>Systemic Involvement</th>
<th>Extracorporeal membrane oxygenation n=1</th>
<th>Transfusion therapy</th>
<th>Platelet n= 4</th>
<th>Erythrocytes n= 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>4</td>
<td>9</td>
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<td></td>
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<tr>
<td>Gastrointestinal</td>
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<tr>
<td>Hepatic</td>
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<tr>
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<tr>
<td>Renal</td>
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<tr>
<td>Central Nervous</td>
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<tr>
<td>Systemic</td>
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</table>

PICU admission

Duration 1- 45 days

Mean: 12,5 days

All Patients Survived

CONCLUSIONS

This study emphasize the importance of early recognition of TSS. The high Paediatric risk of mortality score (PRISM I) value at admission support the severity of these cases and the need for early treatment. A national prospective study is essential to understand the reality of TSS in Portugal.

References