Conformity of antibiotic therapy duration in patients with febrile neutropenia, hospitalised in the haematology department of a university hospital

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INTRODUCTION
The emergence of bacterial resistance and the proper use of antibiotics are major public health issues. In 2011, the European Conference on Infections in Leukemia published new recommendations for the management of febrile neutropenia.

OBJECTIVES
To evaluate the conformity of the duration of antibiotic therapy in patients with febrile neutropenia, hospitalised in the haematology department of a university hospital.

MATERIAL & METHODS

Study characteristics
- Monocentric, retrospective, observational
- Six-month period
- Haematology department: 44 beds

Data collection
- 72-hour apyrexia date
- Extraction from the sofware DxCare™
- Collection form
- Haematological malignancy
- Nature of the infection
- Duration of antibiotic therapy

Compliance criteria
- Undocumented infection: Discontinuation of antibiotic therapy at 72 hours of apyrexia
- Documented infection: Adaptation and discontinuation of antibiotic therapy, according to the recommendations of the local antibiotic guidelines

RESULTS & DISCUSSION

<table>
<thead>
<tr>
<th>Population</th>
<th>Nature of the infection</th>
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</thead>
<tbody>
<tr>
<td>N= 90 patients</td>
<td>Undocumented infection: 61 (69%)</td>
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<tr>
<td>49 ☐ (54%)</td>
<td>Documented infection: 29 (31%)</td>
</tr>
<tr>
<td>41 ☐ (46%)</td>
<td>Microbiological: 23 (25%)</td>
</tr>
<tr>
<td>Average age: 56 years</td>
<td>Clinical: 6 (6%)</td>
</tr>
</tbody>
</table>

Conformity of prescription duration according to the nature of the infection

Cefepime and Piperacillin/Tazobactam are systematically introduced as first-line treatment, as recommended by the European Conference on Infections in Leukemia

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Undocumented infection</th>
<th>Microbiological documentation</th>
<th>Clinical documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliant</td>
<td>46 (51%)</td>
<td>25 (41%)</td>
<td>6 (26%)</td>
<td>2 (33%)</td>
</tr>
<tr>
<td>Non-compliant</td>
<td>44 (49%)</td>
<td>36 (59%)</td>
<td>17 (74%)</td>
<td>4 (67%)</td>
</tr>
</tbody>
</table>

Probabilistic antibiotic therapy

- Monotherapy of Cefepime
- Bitherapy with Cefepime
- Monotherapy of Piperacillin/Tazobactam
- Bitherapy with Piperacillin/Tazobactam

CONCLUSION
The durations of antibiotic therapy may be explain by the fragility of haematology patients and the fear of being confronted with a recurrence of the infection.

To harmonize prescription duration and prevent the emergence of bacterial resistance.

A guide to correct use of antibiotics and a second prospective study should be considered.