VARIATIONS IN CONSUMPTION OF ANTIMICROBIALS IN INTERNAL MEDICINE WARDS OF HOSPITALS

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Background and Importance:
- Relationship between rates of antibiotic use and emergence of antimicrobial resistance is often observed, documented and described.
- Evaluation and analysis of consumption of antimicrobials in relation to variability in the general hospital environment support decision making in the choice of the appropriate therapeutic regimen.

Aim and Objective:
- Presence of variations in consumption of antimicrobials in internal medicine wards.
- Investigation of potential variables in the choice of therapeutic regimen.

Materials and Methods:
- Antibiotic consumption of 3 internal medicine wards (2 clinics in a general hospital + 1 semi autonomous (independent) clinic) as Daily Defined Doses per 100 beddays (DDDs/100BD).
- Average length of stay (LOS) of patients in 2019, in the 3 internal medicine wards of the same healthcare region.

Results:

Comparison:

<table>
<thead>
<tr>
<th>WARD</th>
<th>CLINIC A (GENERAL HOSPITAL)</th>
<th>CLINIC B (GENERAL HOSPITAL)</th>
<th>CLINIC C (INDEPENDENT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BED DAYS</td>
<td>13576</td>
<td>16881</td>
<td>6380</td>
</tr>
<tr>
<td>NUMBER OF PATIENTS</td>
<td>1522</td>
<td>1714</td>
<td>265</td>
</tr>
<tr>
<td>AVERAGE LENGTH OF STAY (days)</td>
<td>8.92</td>
<td>9.85</td>
<td>24.07</td>
</tr>
<tr>
<td>ANTIBIOTIC INDEX (DDDS/100BD)</td>
<td>176.53</td>
<td>184.03</td>
<td>38.12</td>
</tr>
<tr>
<td>NUMBER OF ANTIBIOTICS USED</td>
<td>&gt;90%</td>
<td>&gt;90%</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>MOST USED ANTIBIOTICS</td>
<td>AMPICILLIN/SULBACTAM</td>
<td>AMPICILLIN/SULBACTAM</td>
<td>MEROPENEM</td>
</tr>
<tr>
<td></td>
<td>PIPERACILLIN/TAZOBACTAM</td>
<td>PIPERACILLIN/TAZOBACTAM</td>
<td>PIPERACILLIN/TAZOBACTAM CLINDAMYCIN</td>
</tr>
</tbody>
</table>

DDDs/100BD: Daily Defined Doses per 100 beddays

Antibiotics Consumption in Internal Medicine Wards (DDDs/100BD)

Antibiotics Consumption as Percentage (%) of the Total Index

Conclusions:
- Only small differences in the choice of therapeutic regimen within each hospital internal medicine wards.
- Significant variations in choice of antimicrobials between hospitals need to be attributed.
- Variables (e.g. intensive care profile, increased probability of multiresistant pathogens) related to the general hospital environment may explain the observed variations.
- Such variables should be considered in antimicrobial stewardship programs and/or other initiatives.

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