ANALYSIS OF FREQUENCY OF UNDERDOSING IN OBESE PATIENTS TREATED WITH VANCOMYCIN
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1. BACKGROUND
- Obese patients with normal serum creatinine have increased renal clearance, consequently the dose of some drugs, such as vancomycin should be dosed based on the actual body weight (ABW).
- According to American Society of Health-System Pharmacists (ASHP) guidelines, the recommended dosing regimen is 15-20 mg/kg ABW/12h iv, with subsequent dosage adjustment based on serum vancomycin concentrations.
- Nevertheless in the practice of our hospital vancomycin is often used as a fixed dose regimen regardless of patient weight.

2. PURPOSE
To determine the frequency of underdosing of vancomycin in obese patients and the possible risk factors associated

3. MATERIALS AND METHODS
- A single-center, retrospective, observational study since January 2014- September 2016
- Inclusion criteria:
  - Morbidly obese adult patients (Body Mass Index ≥ 30)
  - With at least one trough level obtained at steady state
  - CrCl > 35ml/min, calculated by Salazar-Corcoran formula

4. RESULTS
46 patients were included:
- Mean age (±SD) was 70,78 ±12,5 years
- Female 63 %
- Mean weight (±SD) was 87,8 ±13,9 kilos
- Mean height was 1,59 ±0,09 metres
- Underdose: 34,8 %

<table>
<thead>
<tr>
<th>Variables associated with underdose</th>
<th>OR</th>
<th>CI 95%</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-</td>
<td>-</td>
<td>0,143</td>
</tr>
<tr>
<td>Body Mass Index classification</td>
<td>-</td>
<td>-</td>
<td>0,679</td>
</tr>
<tr>
<td>Creatinine</td>
<td>-</td>
<td>-</td>
<td>0,079</td>
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<tr>
<td>Age &gt; 65 years</td>
<td>0,206</td>
<td>0,04-0,98</td>
<td>&lt; 0,05</td>
</tr>
<tr>
<td>Initial dosing regimen of 1000mg/12h</td>
<td>0,008</td>
<td>0,0-0,55</td>
<td>&lt; 0,05</td>
</tr>
</tbody>
</table>

5. CONCLUSIONS
- It is important to monitor the levels of vancomycin in obese patients specially with age >65 years and with an initial dosing regimen does not adjusted to patient weight.
- There is not enough data currently to make statements to guide vancomycin dosing in obese patients, so it is necessary to make more studies focus on it.

Conflict of interest: nothing to disclose
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