POSACONAZOL THERAPEUTIC DRUG MONITORING IN A PAEDIATRIC TERTIARY HOSPITAL

A. Font, J. Arrojo, A. Comes, N. Mas, M. Sanchez, J. Vinent
Hospital Sant Joan de Déu, Pharmacy Department, Barcelona, Spain

BACKGROUND AND IMPORTANCE
➢ Posaconazol is used for prophylaxis and treatment of IFD, although there is scarce data on its pharmacokinetics and optimal posology in children.
➢ Posology
  • Oral suspension: 4mg/kg (max 400 mg) tds
  • Tablets: 6mg/kg (max 300 mg) od (bd on day 1)

OBJECTIVES
➢ Determine the number of patients who achieved therapeutic plasma concentrations at steady state (ssCp) (0.7µg/mL-3.75µg/mL) with the dosing schedule of our institutional protocol.
➢ Describe and analyse the pharmaceutical interventions necessary to achieve optimal ssCp and avoid toxicities or treatment failure.

MATERIAL AND METHODS
- Retrospective, observational, single-center study.
- 103 immunocompromised patients receiving prophylactic Posaconazol from April 2020 to September 2021.
- Variables collected: age, weight, formulation and trough ssCp.

RESULTS
➢ Patient characteristics

<table>
<thead>
<tr>
<th>AGE (median, CI)</th>
<th>WEIGHT (mean ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 years (2-23)</td>
<td>33.6kg (±18.3)</td>
</tr>
</tbody>
</table>

➢ Pharmaceutical Form

- Tablets 45%
- Oral Suspension 55%

➢ ssCp after the first draw

- ssCp >3.75 µg/mL: 9%
- ssCp <0.7 µg/mL: 22%
- ssCp within therapeutic range: 69%

- Tablets: 40
- Oral suspension: 31

n= 71

➢ Pharmaceutical interventions

356 pharmaceutical interventions were performed, 151 in patients taking oral suspension and 205 receiving tablets.

Patients receiving oral suspension

- Decreased 11%
- Increased 23%
- No changes 62%

Patients receiving tablets

- Decreased 12%
- Increased 8%
- Discontinued 4%
- No changes 76%

CONCLUSION AND RELEVANCE
➢ Most patients achieved therapeutic ssCp after the first determination according to our scheme.
➢ The need of dose adjustments was more frequent among the oral suspension group in order to achieve a correct ssCp, which is consistent with adult and pediatric population studies.
➢ Importance of pharmacokinetics studies of posaconazol in paediatric population.