EVALUATION OF THE REAL INFUSION TIME OF INTRAVENOUS IMMUNOGLOBULIN AND INFLUENTIAL FACTORS IN ROUTINE CLINICAL PRACTICE ANALYSIS
C. Alonso-Martínez1, E. Serramontmany-Morante1, A. Roig-Izquierdoso2, E. Lozano-Ortiz1, M. Garau-Gomila1, L. Betriu-Sebastia1, J.B. Montoro-Ronsano1
1Pharmacy Service, Nursing1, Hospital Universitari Vall d’Hebron, Barcelona, Spain.

**Background**

**Intravenous immunoglobulin (IVIG)** is the standard of care for humoral immunodeficiencies (HID) and several systemic autoimmune diseases. Its **chronic administration** represents an important economic and logistical impact.

**Purpose**

To assess the real time of infusion of IVIG compared to the established maximums and to analyze which factors could affect it, in order to find out if the infusion rate could be higher.

**Material and Methods**

**OBSERVATIONAL, AMBISPECTIVE STUDY**

- **Population:** patients chronically receiving IVIG, day tertiary hospital
- **Study period:** December 2016 – March 2017
- **Variables registered** (from medical records and nursing software)
  - **Biodemographic data:** sex, age, weight
  - **Clinical data:** primary diagnosis, dose, frequency of administration
  - **Infusion and premedication times**

**Results**

<table>
<thead>
<tr>
<th>Population</th>
<th>Diagnosis</th>
<th>Comercial preparation</th>
<th>Mean and SD of infusion rates</th>
<th>Total of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>Humoral immunodeficiencies</td>
<td>Intratec®</td>
<td>9.14 g/h SD 0.98 g/h</td>
<td>n=3</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>Neurological disease</td>
<td>Octagamocta®</td>
<td>8.48 g/h SD 1.81g/h</td>
<td>n=25</td>
</tr>
<tr>
<td>Men</td>
<td>Systemic autoimmune disease</td>
<td>Privigen®</td>
<td>8.39 g/h SD 2.30g/h</td>
<td>n=84</td>
</tr>
<tr>
<td>175</td>
<td>69 (39.4%)</td>
<td>Flebogamma-Plangamma5®</td>
<td>7.33 g/h SD 1.76 g/h</td>
<td>n=36</td>
</tr>
<tr>
<td>55 (20-91)</td>
<td>Neurological disease</td>
<td>Flebogamma10%®</td>
<td>7.61 g/h SD 1.54 g/h</td>
<td>n=16</td>
</tr>
<tr>
<td>49 %</td>
<td>Systemic autoimmune disease</td>
<td>Kiovig®</td>
<td>7.30 g/h SD 2.60g/h</td>
<td>n=6</td>
</tr>
<tr>
<td>11</td>
<td>17 (9.7%)</td>
<td>Gammagard®</td>
<td>6.44 g/h SD 2.08 g/h</td>
<td>n=5</td>
</tr>
</tbody>
</table>

- The dose administered, need of premedication and commercial preparation had an impact on the time of infusion; however, it was not affected by sex, weight or age.
- All preparations were infused at a lower rate (p <0.05) than the maximum set in the technical sheet.
- Premedication was necessary in 72 patients (41%) being oral acetaminophen the most commonly used. However, premedication combinations were also effective (31 patients, 18%) being acetaminophen + dexchlorpheniramine (11 patients) the most used.

**Conclusion**

1. Administration of IVIG is performed at an infusion rate that is below the established maximums.
2. Many patients need premedication to avoid infusion reactions.
3. Increasing the rate of IVIG administration should be considered for those patients with good tolerance, saving time and money invested in day hospital.