

HUMAN NORMAL IMMUNOGLOBULIN REQUIREMENTS IN PAEDIATRIC PATIENTS WITH PRIMARY IMMUNODEFICIENCY, FOCUSING ON THE ADMINISTRATION ROUTE SWITCHING

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BACKGROUND

Human normal immunoglobulin (HNIg) indications are replacement. This therapy can be administered intravenously monthly (IVIG) or subcutaneously weekly (SCIG). Due to possibility of self-administration and a better safety profile of SCIG, this route is being increasingly preferred by patients and physicians.

PURPOSE

To describe the changes in HNIg requirements as replacement therapy in paediatric patients with primary immunodeficiency (PID), focusing on the IVIG to SCIG switching.

MATERIAL AND METHODS

Based on medical history records, we collected the dosage of HNIg treatments of paediatric PID patients both on IVIG and SCIG, in our hospital during 12 months.

Then we analysed the subgroup of patients treated with SCIG: we conducted a retrospective data collection of the previous IVIG requirements, the SCIG doses and the IgG plasma levels reached.

RESULTS

34 patients treated with HNIg

- ✓ 28 IVIG, median monthly dose of 441mg/kg
- ✓ 6 SCIG, median monthly dose of 410mg/kg

SCIG PATIENTS: 6 active in the study and 2 previously treated, median of 15.8 months on treatment [11-23]

All were treated previously with IVIG, with a monthly dose required of 541mg/kg/month [442.5-702.5]

IgG PLASMA LEVELS: 8882mg/L

[8454.5-9725]

All the SCIG switches were performed using dose equivalence 1/1 of the monthly IVIG as a weekly regimen

IgG PLASMA LEVELS: 10212.5mg/L

(1-3 months after the switch) [9790.5-10847.5]

✓ During follow up, the monthly SCIG dose was reduced in 6/8 patients (mainly by widening the administration interval from weekly to every 10-14 days) still keeping plasma IgG levels of 10000.5mg/L [8515.5-10635].

✓ This dose optimization means a 24.1% reduction between IVIG dose required previously (541.3mg/kg/month [355-739]) to the SCIG dosing at the end of the study (410.8mg/kg/month [332-504])

CONCLUSION

A priori, SCIG treatments have similar dose requirements than IVIG, but we have shown that in our patients, the switch allowed a HNIg dose reduction of 24%, still keeping correct IgG plasma levels.

The SCIG pharmacoeconomic profile seems to be more interesting, although other studies are lacking to validate these results.