

INTRAVENOUS IMMUNOGLOBULINS USE FOR CHILDREN'S NEUROLOGICAL AND NEURODEVELOPMENTAL DISORDERS

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BACKGROUND

Intravenous immunoglobulins (IVIG) indications are replacement therapy and as immunomodulatory therapy for several autoimmune disorders. However, it has been estimated that neurologic indications (either labeled or off-label) can account for up to 43% of IVIG used in clinical practice. (1)

OBJECTIVES

To evaluate the use of IVIG in paediatric patients from the Neurology Department of a children's care reference hospital.

METHODS

Based on medical history records, we collected, classified and analyzed retrospective data from January 2013 to December 2017 of all children who received IVIG followed by our Neurology Department. We contrasted our results with the recent published review about the IVIG use in paediatric neurological and neurodevelopmental disorders (2).

Patients diagnosed during an enterovirus encephalitis spread during 2016 in our region were excluded.

RESULTS AND DISCUSSION

60 patients treated with IVIG

- ✓ 29 *Peripheral nervous system diseases*
 - ✓ 22 Guillain-Barre syndrome
 - ✓ 6 Chronic Inflammatory Demyelinating Polyneuropathy
 - ✓ 1 Myasthenia Gravis
- ✓ 14 *Central nervous system diseases*
 - ✓ 4 *Acute encephalomyelitis disseminata*
 - ✓ 4 *Refractory Epilepsy*
 - ✓ 2 *Ataxia-telangiectasia*
 - ✓ 2 *Acute cerebellitis*
 - ✓ 2 *Anti-NMDA encephalitis*
- ✓ 17 *Non-neurological specific indications*
 - ✓ 4 *Post-rituximab hypogammaglobulinaemia*
 - ✓ 4 *Opsoclonus myoclonus*
 - ✓ 4 *Infectious encephalitis*
 - ✓ 5 *Other*

- ✓ All patients received a dose considered correct (immunomodulatory: 1-2 g/kg/dose, replacement therapy: 0.3-0.5 g/kg/dose)
- ✓ Regarding safety concerns, only three mild adverse events were reported

CONCLUSION

- IVIG are used in a number of indications not labelled in Spain, although substantiated in solid evidence and probably with a good safety profile
- Other diagnostics unrelated to neurological disorders were detected. Given the economic impact of this therapy, it is necessary to protocolize its use in order to carry out a rational use of health resources

REFERENCES

- (1) Zivkovic S. Intravenous immunoglobulin in the treatment of neurologic disorders. *Acta Neurol Scand* 2016;133:84-96
- (2) Gadian J et al. Systematic review of immunoglobulin use in paediatric neurological and neurodevelopmental disorders. *Dev Med Child Neurol*. 2017;59:136-144