Teaching NeuroImages: IgG4-related orbital disease and enlargement of the trigeminal nerve branches

A 54-year-old man had a 5-year history of painless bilateral eyelid swelling, proptosis, and diplopia. MRI showed enlargement of extraocular muscles, lacrimal gland, and divisions of the trigeminal nerve (figure 1). Biopsy from the left infraorbital canal demonstrated lymphoplasmacytic infiltrate and fibrosis. Mean number of immunoglobulin G (IgG)4+ cells was 155 per high-power field and ratio of IgG4+/IgG+ cells was 89% (figure 2).

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Serum IgG4 concentration was 878 mg/dL (normal range 4–86 mg/dL). Symptoms resolved with steroids. The patient relapsed during tapering and azathioprine was added. IgG4-related disease is characterized by IgG4-positive cells and lymphocyte infiltration into various organs, including orbital tissues. Thickening of branches of the trigeminal nerve is highly suggestive of IgG4-related disease.1,2

AUTHOR CONTRIBUTIONS

Dr. R. Deschamps: corresponding author; drafting/revising the manuscript for content, including medical writing for content. Drs. L. Deschamps, Vignal, Putterman, Galatoire, and Gout: drafting/revising the manuscript for content, including medical writing for content.

STUDY FUNDING

No targeted funding reported.

DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

REFERENCES

Teaching NeuroImages: IgG4-related orbital disease and enlargement of the trigeminal nerve branches
Romain Deschamps, Lydia Deschamps, Catherine Vignal, et al.
Neurology 2013;81:e117-e118
DOI 10.1212/WNL.0b013e3182a82393

This information is current as of October 7, 2013

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