Bilateral orbital abscesses and cavernous sinus thrombosis in a young patient with Immunoglobulin-A deficiency

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Background

While rare in itself, Immunoglobulin-A deficiency (IgAD) is the most common inherited primary immunodeficiency(1), rendering patients susceptible to recurrent gastro-intestinal and respiratory infections, including chronic rhinosinusitis(2); however, no cases of IgAD and acute rhinosinusitis (ARS) or orbital abscesses have been described.

A 15-year-old female presented with one-week history of coryzal symptoms, and three-day history of facial pain, headache, and pyrexia, bilateral proptosis and peri-orbital cellulitis, worse on the right. Computed tomography (CT) and magnetic resonance imaging (MRI) showed pansinusitis, raised intracranial pressure and cavernous sinus thrombosis. Endoscopic sinus surgery (ESS) revealed pus in the right sphenoid sinus.

Despite systemic antimicrobial therapy, the patient developed ophthalmoplegia, diplopia and bilateral abducens nerve palsies. Magnetic resonance imaging revealed intra- and extra-conal orbital empyemas

Method

Bilateral endoscopic medial orbital wall and partial inferior wall orbital decompression was performed along with complete ESS. The patient was anti-coagulated with haematology and paediatric neurology advice.

Results

Further investigation revealed IgAD which was managed appropriately in the Combined Paediatric Immunodeficiency Clinic.

A further episode of unilateral right periorbital cellulitis two months later was managed conservatively.

At 12-month follow-up all symptoms had resolved.

Conclusion

Immune deficiencies should be considered in complicated cases of sinusitis. Prompt diagnosis of immune deficiency is imperative to improve clinical outcome. A multi-disciplinary team approach is essential in complex cases.

Reference

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