Immunoglobulin G4 related disease presentation in ENT

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Background

Immunoglobulin G4 related disease (IgG4-RD) includes a range of conditions that were previously regarded as unrelated. Involvement of salivary glands in IgG4-RD is not uncommon, with the main presenting symptom being gland swelling and reduced saliva secretion.¹

It is equally distributed amongst males and females with a peak presenting age of 60 years.

Our case study report involves a literature review and our objective is to describe ENT-specific IgG4-RD presentations with explore the associated diagnostic challenges.

Case Report

A 78 year old gentleman presented to our department with a 4-year history of right sided submandibular swelling.

Ultrasound revealed lymphoepithelial sialadenitis and a core biopsy was diagnostic for IgG4 disease based on immunohistochemistry stains.

Blood tests revealed:

IgG2 -	8.63	(1.20 - 6.60)
IgG4 -	8.91	(0 - 1.30)
IgG1 -	normal	
IgG3 -	normal	

Previous medical history consisted of prostate cancer and pancreatic exocrine insufficiency associated with a mass requiring common bile duct stenting.

Retrospectively, it is possible to conclude that this may have been related to his IgG4 disease.

Upon diagnosis, tertiary immunology referral was sought and prior to review by immunology the mass spontaneously resolved. The recommended management involved conservative surveillance with advice given on an appropriate steroid regime to manage any further relapses. The patient is currently being managed with surveillance ultrasound and serology (IgG levels) jointly by both specialist teams.

Figure 1

Submandibular gland swelling

Figure 2

Right sided submandibular gland enlargement – MRI, T1 weighted

Figure 3 a & b

Histopathological investigations frequently reveal periductal sclerosis with ductal dilatation and dense lymphocytic infiltrations

Discussion

Chronic IgG4-RD can present with multiple masses as wide as 5cm in diameter and microscopic assessment usually demonstrate moderate distortion alongside lymphoplasmacytic infiltration.²

Lymph node involvement, both localised and systemic, is another common feature, which can make diagnosis difficult with differentials including lymphoma, metastatic disease and other autoimmune and haematological pathologies. Sinister symptoms such as night sweats and weight loss, are uncommon.

Presently, there is no convincing evidence in the literature to favour active medical or surgical treatment options. However, a general consensus amongst specialists demonstrates the role of glucocorticoids in symptom reduction. They are also recommended in advanced disease to improve organ function.³ The usual starting regime being 40mg Prednisolone or 0.6mg/kg per day, tapered down over 3-4 months with a first dose reduction starting at 2-3 weeks. In resistant cases, Azathioprine and Methotrexate has been used as well as cyclophosphamide in severe cases.

Spontaneous remission remains the usual outcome as in our case. Accordingly conservative management with follow up at regular intervals is generally the recommended plan for those with minimal symptoms. However, relapses may occur either in the previously affected organ or in any other organ; with or without further increase in IgG4 levels.⁴

IgG4-RD remains an ambiguous disease process with an ambivalent management plan. Further research has involved identification of other biomarkers such as plasmablasts in aiding diagnosis and it remains to be seen if expensive imaging such as PET-CT will become part of the management plan for such patients.

Conclusion

IgG4-RD is recognised as a relapsing/remitting disease process that generally resolves spontaneously with no definitive evidence to favour medical therapies or surgical excision apart from the use of glucocorticoids. It is important that ENT surgeons are aware of this disease phenomenon as part of the differential for salivary gland enlargement to avoid unnecessary surgical excision.

References

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