Development of Graves’ Ophthalmopathy Post-thyroidectomy: Important Lessons for Clinical Practice

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Case Background

• 73-year-old lady, non smoker, presented with weight-loss, tiredness and sweating.
• No eye signs or symptoms elicited
• T4 65.7pmol/L and TSH <0.02mmol/l. TPO antibody negative, TSH receptor antibody high 9.1U/L
• Thyroid USS: Reduced echogenicity, increased vascularity, 3.2cm U3 nodule in the L lobe
• Initiated on carbimazole & propanolol, FNAC thyroid nodule planned
• Developed a severe reaction within 17 days of starting carbimazole with widespread urticarial rashes and joint pain
• Persuaded to take a short course of PTU prior to total thyroidectomy.

Uneventful surgery with post op calcium and thyroxine replacement.

Three months post-thyroidectomy she developed bilateral eyelid erythema, adnexal swelling and vertical diplopia

High dose methylprednisolone and oral prednisolone was prescribed, improving the eye disease significantly 13 months after thyroidectomy, TSH receptor antibody was <0.3U/L

Literature Assessment

Graves’ ophthalmopathy & hyperthyroidism

• Typically occurs within 18 months of each

• Autoimmune retro bulbar reaction to thyroid stimulating hormone receptor antibodies prompting fibroblast proliferation

• Thyroidectomy significantly reduces thyroid-stimulating hormone receptor autoantibody levels

• New development of Graves’ ophthalmopathy following thyroid surgery is felt to be rare

Key Learning Points

Paucity of research evidence regarding risk of ophthalmopathy developing post-thyroidectomy.
Importance of consenting patients appropriately at the time of surgery regarding the risk of eye disease developing.
Patient education regarding identifying and seeking medical help for thyroid eye disease post-op.

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