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## Rheumatic Manifestations in Graves' Disease.

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### INTRODUCTION

While often confused and thought to be the same, it is important to note the differences between Hyperthyroidism and Grave's Disease. Grave's disease is an autoimmune disease that causes the immune system to disrupt and increase the thyroid's normal production of the thyroxine hormone (hyperthyroidism). [1]. 25% to 40% of patients with Graves' disease experience Thyroid eye disease, also known as Graves Ophthalmopathy [2]. Thyroid eye disease is characterized by swelling/bulging around the eyes, and occurs within the first two

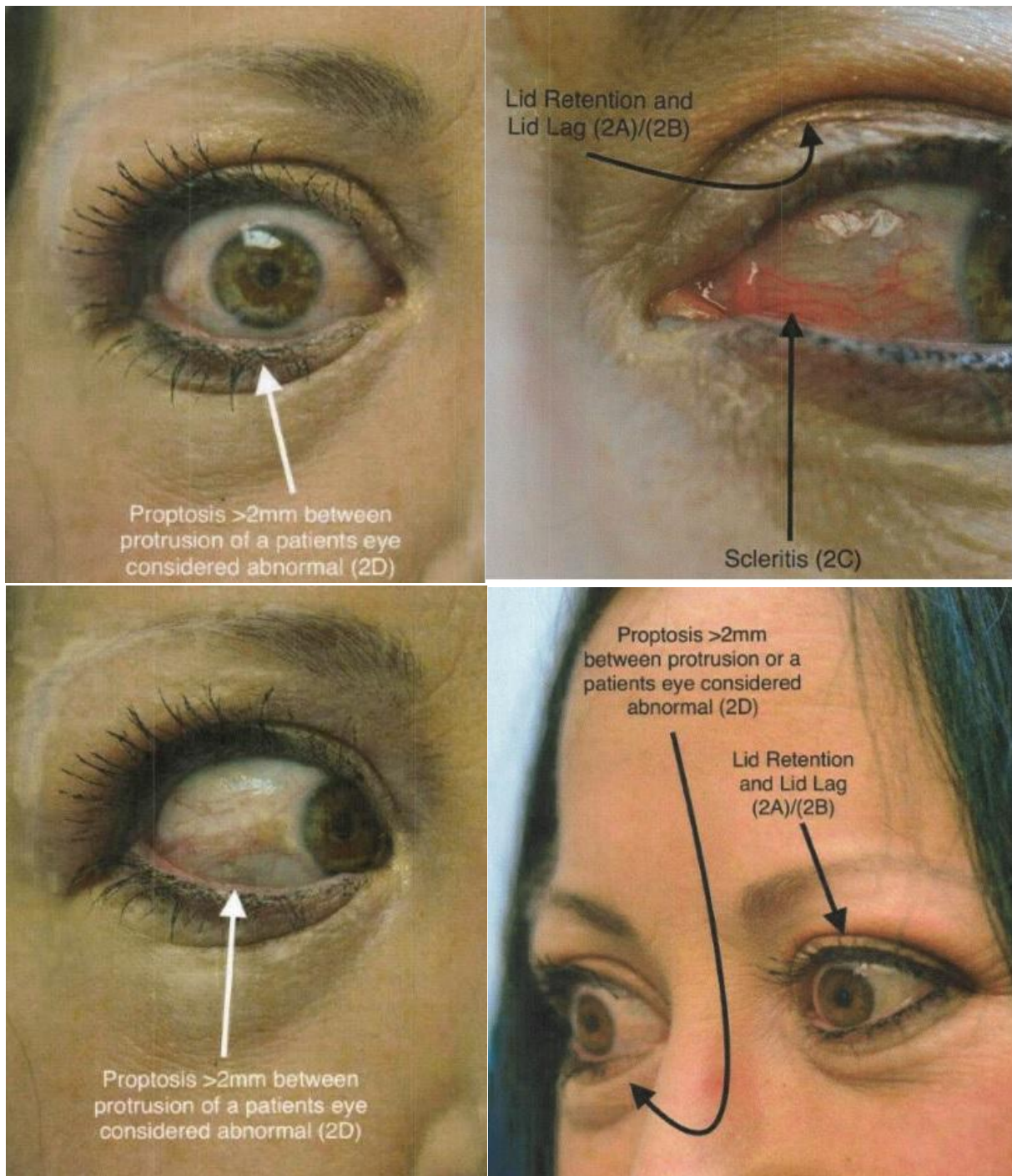
years of the diagnosis of Graves' disease [3]. Graves' disease usually affects people between ages 30 and 50, but can occur at any age [4]. Graves' disease is seven to eight times more common in women than men and as well as more common in those that have Rheumatoid Arthritis, Type one diabetes, Vitiligo, and/or a family history Graves' Disease or Hashimoto's disease [5].

## CASE

44 y/o, menstruating, white female presented to Rheumatology with painful legs and ocular discomfort. The patient has a history of Graves' disease. Graves' disease was treated with radiation followed by thyroidectomy. The patient now remains on Synthroid 75mcg/qd. The patient describes painful lower legs and discomfort with her skin. Figure 1 shows elevated erythematous skin in anterior tibial regions. Skin biopsy revealed mucinosis or prominent mucus deposits in the upper and mid dermis beneath the thickened epidermis with no inflammatory cells (Figure 1). This is consistent with the diagnosis of pretibial myxedema. In Figure 2 the patient's lid retraction (labeled 2A), lid lag (labeled 2B), scleritis on her left eye (labeled 2C), and proptosis on her right eye (labeled 2D) are depicted. Patient is currently being treated with Tepezza (teprotumumab) monthly, a monoclonal antibody that binds and prompts internalization and degradation of the IGF-1R receptor. To date, patient presents with satisfactory results.



**Figure 1:** Elevated erythematous skin in anterior tibial regions



**Figure 2:** hotsf Graves' disease depicting lid retraction (labeled 2A), lid lag (labeled 2B), scleritis on her left eye (labeled 2C), and proptosis on her right eye (labeled 2D)

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**Data Availability Statement:** All data are HIPAA protected and available upon request.

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