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Case reports

A Geriatric Patient with Fewer Classical Symptoms of Hyperthyroidism

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INTRODUCTION

Overt hyperthyroidism is a condition in which the thyroid gland is overactive and produces too much of thyroid hormone. This is more common in women than in men (5:1 ratio).[1] The overall prevalence of hyperthyroidism (approximately 0.2 to 1.4 percent) increases to 4-5 percent in older women. This is also more common in smokers.[2] Graves' disease, toxic multinodular goiter, and toxic adenoma are the most common causes of hyperthyroidism. Graves' disease is most common in younger women, and toxic nodular goiter is more common in older women. The classic symptoms of hyperthyroidism include unintentional weight loss, diarrhea, heat intolerance, palpitations, anxiety, and insomnia.[3] Older patients have fewer classic symptoms of hyperthyroidism. However, weight loss, shortness of breath, and atrial fibrillation occur more commonly in older than younger populations. Sometimes, the diagnosis is missed due to atypical presentations in geriatric patients. Here we present a female patient of 70 years age with a long-standing history of shortness of breath and less classic symptoms newly diagnosed with Graves' disease.

CASE REPORT

A geriatric female aged 70 years with a pertinent medical history of chronic insomnia presented with 1-year history of shortness of breath, pounding heart on exertion, shaking, numbness and tingling in hands and legs, squeezing chest pain, dizziness, and lightheadedness. On presentation, her vitals were temperature 98.6^{0}F, pulse 74 beats per minute, RR 14 breaths per minute, room air oxygen saturation 99%. Physical examination was unremarkable. Prior to this presentation, her cardiologist diagnosed inappropriate sinus tachycardia based on event monitor results and started ivabradine. The patient reported no change in symptoms after being on ivabradine. The patient was then referred to a pulmonologist to rule out pulmonary etiology of shortness of breath, for which lab work was ordered. Meanwhile, the patient developed puffy and popping eyes and dry eyes without relief with artificial eye drops. Laboratory analysis revealed TSH <0.01 mIU/L (normal range 0.40-4.50 mIU/L), free T4 4.0 ng/dL (normal range 0.8-1.8 ng/dL) which confirmed a new diagnosis of hyperthyroidism. She was treated promptly with a beta blocker atenolol and antithyroid drug methimazole. Subsequently, the patient started to feel symptomatic improvement and she has established with an endocrinologist and ophthalmologist. Her tachycardia resolved with atenolol, and hence ivabradine was discontinued by cardiology. Endocrinology diagnosed Autoimmune Grave's disease and referred her to a thyroid ophthalmologist. Of note, the patient was also on trazodone and alprazolam for chronic insomnia, which improved with thyroid treatment significantly.

DISCUSSION

Geriatric hyperthyroidism may be apathetic, rather than having hyperactivity, tremor, and other symptoms of sympathetic hyperactivity.[4-7] In older patients, cardiopulmonary symptoms such as tachycardia (or atrial fibrillation), dyspnea on exertion, and edema may predominate.[8, 9]

Serum TSH has the highest sensitivity and specificity of any blood test used in the evaluation of thyrotoxicosis and should be used as an initial test. If the serum TSH level is normal, the patient is very unlikely to have primary hyperthyroidism. Most laboratories in the United States have adopted algorithms in which free T4 and free T3 are automatically measured when a low serum TSH is measured.

Prior to initiating therapy in a geriatric patient, clinicians should be aware of any non-thyroidal causes of TSH suppression. For instance, an acutely ill hospitalized elderly patient may demonstrate suppressed TSH due to non-thyroidal illness without actual hyperthyroidism. Thyroid disease in the geriatric population warrants special care and attention, as the clinical presentation is often different from that of younger individuals. Co-morbidities and polypharmacy associated with older age pose unique challenges while managing this population.[10] Hyperthyroidism exacerbates underlying chronic disease, especially cardiovascular conditions. Older adults can be treated successfully and stabilized with careful screening, astute diagnostics, and appropriate therapy.[11]

CONCLUSION

This case report attempts to highlight geriatric hyperthyroidism. With the increasing geriatric population, especially in the inpatient populations in the hospital setting, it is imperative for clinicians to be aware of atypical and fewer

classical presentations, doing so could avoid treatment delay and achieve optimal patient outcomes.

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