Clinical Report

Patient Information

- **Name:** Olivia Hayes
- **Date of Birth:** 02/18/1993
- **Age:** 32
- **Gender:** Female
- **Contact Information:** (555) 012-3456, olivia.hayes@email.com
- **Address:** 1212 Parkview Dr, Suite 501, Anytown, USA

Referring Physician

- Dr. Amina Khan, MD
- Primary Care Physician
- City Health Medical Group

Medical Institution

- Anytown Endocrinology Associates
- **Report Date:** 07/18/2025

Clinical History and Background

Olivia Hayes is a 32-year-old marketing manager referred by her primary care physician, Dr. Khan, for evaluation of symptoms consistent with hyperthyroidism. Ms. Hayes has been in her usual state of excellent health until approximately four months ago. She initially attributed her symptoms of anxiety, tremor, and weight loss to high stress levels at work, as her team was navigating a major product launch. However, when the symptoms persisted and worsened despite the project's completion, she sought medical care. Her past medical history is unremarkable. She has a family history significant for a mother with Hashimoto's thyroiditis and a maternal aunt with Celiac disease, highlighting a familial predisposition to autoimmune conditions. She is a non-smoker and drinks alcohol socially.

Current Symptoms & Patient-Reported Outcomes (PROs)

- **Anxiety and Palpitations:**
    - **Patient's Description:** "I feel like I'm in a constant state of panic. My heart is always racing, pounding in my chest, even when I'm just sitting at my desk. It's impossible to relax."
    - **Severity:** Severe. She rates her anxiety as a constant 8/10. The palpitations are very distressing and cause her to have trouble sleeping.
    - **Duration:** Progressively worsening over four months.
    - **Clinical Note:** These are classic adrenergic symptoms of excessive thyroid hormone, which sensitizes the body to catecholamines like adrenaline.

- **Unintentional Weight Loss:**
    - **Patient's Description:** "It's bizarre. I'm hungry all the time and eating way more than I normally do, but I've lost over 20 pounds. My clothes are all loose."
    - **Severity:** Significant and concerning to the patient.
    - **Duration:** Over the past four months.
    - **Clinical Note:** Weight loss despite increased appetite (hyperphagia) is a hallmark of the hypermetabolic state induced by thyrotoxicosis.
- **Heat Intolerance and Excessive Sweating:**
    - **Patient's Description:** "I'm hot all the time. My colleagues are wearing sweaters in the office, and I'm sweating through my blouse. I have to sleep with the window open, even when it's cool outside."
    - **Severity:** Severe, causing significant discomfort and social embarrassment.
    - **Duration:** Worsening over the past three months.
    - **Clinical Note:** Increased basal metabolic rate leads to increased heat production.
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- **Hand Tremor:**
    - **Patient's Description:** "My hands shake so much it's noticeable. I feel clumsy trying to type or put on makeup. Holding a full cup of coffee is a real challenge."
    - **Severity:** Moderate, but impacts her fine motor skills and is a source of self-consciousness.
    - **Duration:** Noticed over the last two months.
    - **Clinical Note:** A fine, high-frequency tremor is a common physical sign of hyperthyroidism.
- **Eye Changes:**
    - **Patient's Description:** "My eyes constantly feel gritty and irritated, like there's sand in them. My friends have commented that my eyes look bigger, like I'm staring."
    - **Severity:** Mild discomfort, but the change in appearance is concerning.
    - **Duration:** Noticed over the past month.
    - **Clinical Note:** These symptoms are suggestive of early Graves' ophthalmopathy (thyroid eye disease).

Clinical Findings

- **Vital Signs:**
    - **Blood Pressure:** 140/70 mmHg (wide pulse pressure)
    - **Heart Rate:** 115 bpm (sinus tachycardia)
    - **Respiratory Rate:** 18 breaths/min
    - **Temperature:** 99.1°F (37.3°C)
- **Physical Examination:**
    - **General:** Appears anxious, restless. Skin is warm and moist.
    - **Neck:** Thyroid gland is diffusely enlarged (estimated 2x normal size), smooth, and non-tender. A bruit (a sound heard with a stethoscope) is audible over the gland, indicating increased blood flow.

    - **Eyes:** Bilateral, symmetric proptosis (forward protrusion of the eyeballs) is present. There is notable lid lag and scleral show.
    - **Cardiovascular:** Tachycardia with a regular rhythm.
    - **Neurological:** A fine tremor is present in the outstretched hands. Deep tendon reflexes are brisk (3+).
- **Laboratory Results:**
    - **Thyroid Stimulating Hormone (TSH):** <0.005 uIU/mL (Normal 0.4-4.5 uIU/mL) - *Suppressed*.
    - **Free Thyroxine (Free T4):** 3.8 ng/dL (Normal 0.8-1.8 ng/dL) - *Markedly elevated*.
    - **Total Triiodothyronine (Total T3):** 350 ng/dL (Normal 80-200 ng/dL) - *Markedly elevated*.
    - **Thyroid Stimulating Immunoglobulin (TSI):** 3.5 IU/L (Normal < 0.55 IU/L) - *Positive*.

Diagnosis

The clinical presentation of severe thyrotoxicosis, coupled with the hallmark physical findings of a diffuse goiter with a bruit and clear signs of ophthalmopathy, is highly indicative of Graves' Disease. The diagnosis is definitively confirmed by the laboratory results showing a suppressed TSH, elevated free thyroid hormones, and a positive TSI antibody, which is the pathogenic antibody responsible for the disease.

Treatment Strategy

The treatment goals are to rapidly control her severe symptoms, restore a euthyroid state, and then establish a long-term management plan.

1. **Immediate Symptom Control:**
    - **Beta-Blocker:** She will be started immediately on propranolol 20mg four times a day. This will not treat the underlying thyroid overproduction but will effectively block the adrenergic effects, providing rapid relief from palpitations, tremor, and anxiety.
2. **Definitive Thyroid Treatment:**
    - **Antithyroid Drugs (ATDs):** We will initiate treatment with methimazole 20mg daily. This medication blocks the thyroid gland's ability to produce new hormone. The risks (including the rare but serious side effect of agranulocytosis) and benefits were discussed at length. She was given strict instructions to stop the medication and seek immediate medical attention if she develops a fever or sore throat.
    - **Other Options:** The alternative definitive treatments of radioactive iodine (RAI) ablation and thyroidectomy were discussed as future possibilities should she not tolerate or respond to ATDs, or if she desires a permanent solution after a course of medical therapy.

Summary and Plan

Ms. Olivia Hayes is a 32-year-old female with a clear new diagnosis of Graves' Disease, which is causing severe and distressing symptoms. We have initiated a two-pronged medical approach to provide both immediate symptomatic relief with a beta-blocker and to treat the underlying autoimmune process with an antithyroid drug. Our plan is to normalize her thyroid function over the next several weeks and then work with her to decide on a long-term management strategy, aiming for eventual remission.

Follow-up

Close monitoring is essential. She will have follow-up thyroid function tests in four weeks to assess her response to methimazole and to guide dose adjustments. We will have a phone check-in in one week to ensure she is tolerating the medications. She will have regular follow-up appointments every 4-8 weeks until her thyroid levels are stable. A referral to ophthalmology will be made to establish baseline and monitor her Graves' eye disease.