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Shadi Jarjous MD
Lehigh Valley Health Network, Shadi.Jarjous@lvhn.org

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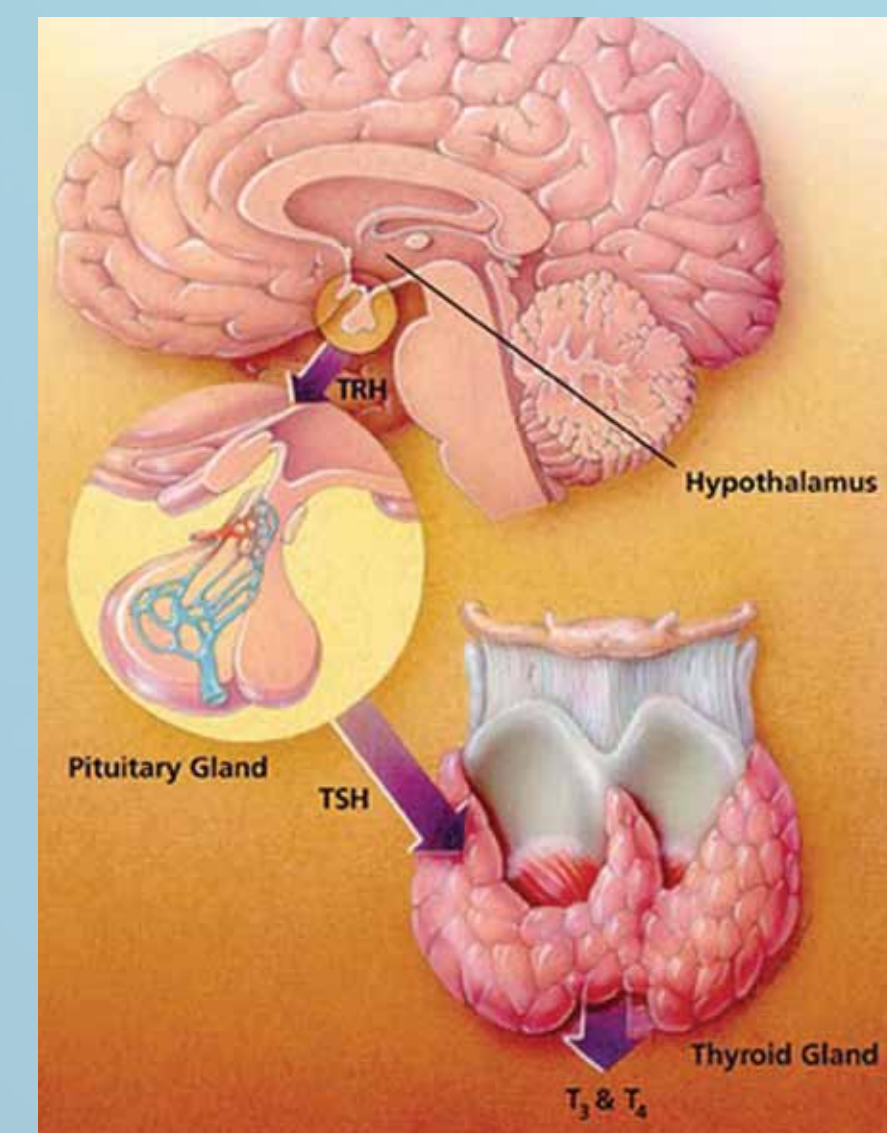
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Surviving Myxedema Coma in a Patient with Previously Undiagnosed Hypothyroidism

Shadi Jarjous, M.D., Lehigh Valley Hospital, Allentown, Pennsylvania

Introduction

- Myxedema coma is a clinically diagnosed, rare, life-threatening condition that is seen in less than 0.1 % of all cases of hypothyroidism.
- It is usually precipitated by metabolic-related stressors that overwhelm the body's compensatory responses to hypothyroidism:
 - Infection
 - Medication
 - Trauma
 - Burn
 - Bleeding
 - Stroke
 - Surgery
- Myxedema coma is usually seen in older women in the winter months.



Case Description

History

- D. C. is a 59 years old Caucasian female, without history of hypothyroidism, who presented to the emergency department after her family noted mental status changes.
- The patient has not seen a physician in decades.
- Her husband reported that months prior to admission, the patient sustained an injury to her right foot after stepping on a broken glass at home. The patient declined to seek medical attention and treated it with iodine peroxide.
- Over the past couple of months prior to admission, she had progressively worsening gait dysfunction secondary to foot pain from the non-healing wound.
- She developed non-pitting edema initially of the right foot, which evolved to include the bilateral lower extremities.
- The patient became confined to the couch, requiring maximum assistance for ambulation.
- Her condition worsened during the week prior to admission with cold intolerance, urinary retention, occasional incontinence, hallucinations, slurred slow speech and decreasing level of consciousness, in addition to her chronic complains of fatigue, anorexia, hair loss and depression.

Physical Exam

- On presentation, the patient had hypothermia, bradycardia, hypotension, myxedematous face, alopecia, ascites and Anasarca.
- She had a visible non-healing ulcer involving her right foot.

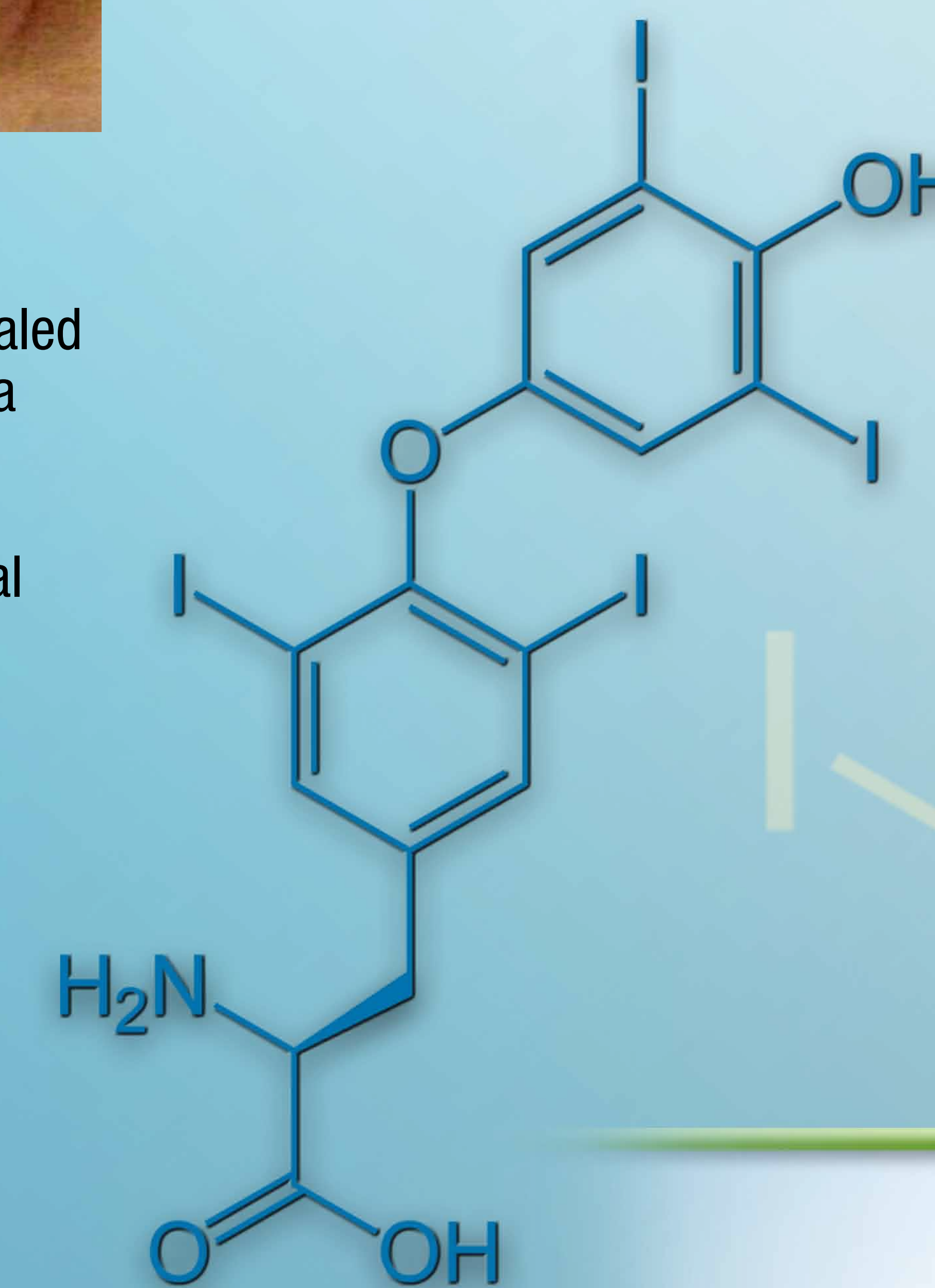


Investigational studies

- Extensive laboratory and radiographic testing revealed acute hypercapnic respiratory failure, pancytopenia with bandemia, hyponatremia, hypokalemia, hypomagnesemia, hyperlipidemia, transaminitis, CHF, pneumonia, cerebral edema, pleural and pericardial effusions, and mesenteric edema.
- TSH level was elevated at 96.33 uIU/ml with T4 < 0.10 ng/dl.

Hospital course

- The patient was treated in the medical intensive care unit where she required intubation for decreased level of consciousness, increased work of breathing, and hypoxia.
- She was warmed by an external warming blanket and resuscitated with intravenous fluids followed by the addition of multiple vasopressors.
- Treatment of the profound hypothyroidism started with levothyroxine 250 mcg IV bolus initially followed by 100 mcg PO daily.
- She was started on antibiotics for presumptive septic shock secondary to MSSA osteomyelitis of right 4th toe and underwent open transmetatarsal amputation of the toe with excisional debridement of right foot when she was stabilized from a hemodynamic stand point.



Outcome

- The patient made an astonishing recovery during her twenty day hospital stay and was discharged to a skilled nursing facility for rehabilitation.

Discussion

- We report the successful treatment of a patient with myxedema coma with levothyroxine administered via an orogastric tube and supportive care in the medical ICU.
- Reported cases of Myxedema coma are rare.
- Despite aggressive management, mortality rate still approaches 40 %.
- Prompt recognition and treatment with thyroid hormone combined with pulmonary and cardiovascular support in an intensive care setting is essential for survival.