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Case Report

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Myxedema Coma: A Rare Case Report of Severe Hypothyroidism in Uganda

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Abstract

Objective: *in this report, we describe a case of myxedema coma in a 46-year-old Ugandan lady who had never before had hypothyroidism.*

Investigations and Medical Care: *The patient's first presentation included bradycardia, hypothermia, and a noticeably low Glasgow Coma Scale score. Laboratory examinations revealed severe primary hypothyroidism. Intravenous levothyroxine, hydrocortisone, and supportive care were the first steps in the treatment.*

Results: *After receiving therapy for one week, the patient achieved a full recovery. Thyroid function tests showed improvement back to normal range.*

Conclusion: *This case highlights the importance of considering myxedema coma in the differential diagnosis of altered mental status, even in resource-limited settings. Increased awareness, prompt diagnosis, and appropriate treatment can be life-saving in these cases.*

Keywords: Myxedema Coma, Hypothyroidism, Uganda

1. Introduction

Myxedema coma is an extreme and rare incarnation of undressed severe hypothyroidism. It represents a medical emergency with a high mortality rate of 60–80 if prompt treatment isn't initiated [1]. In addition to the signs and symptoms of chronic hypothyroidism, myxedema coma is marked by depression of internal status, hypothermia, bradycardia, hypovolemia, hypoventilation, and hypoglycemia [2].

Myxedema coma is thought to affect 0.22 to 0.37 instances per million people annually [3,4]. It tends to affect older women with undressed primary hypothyroidism. Still, it can also be occur in cases of secondary hypothyroidism or those rendered hypothyroid after a remedy for hyperthyroidism [5]. The pathogenesis of myxedema coma involves long-standing thyroid hormone insufficiency leading to generalized hypoactivity and hypometabolism at the tissue position [6].

Factors contributing to myxedema coma include cold exposure, trauma, infection, cerebrovascular events, and certain specifics [7]. These factors can decompensate a case of severe beginning hypothyroidism and precipitate myxedema coma. Without prompt opinion and treatment, cases witness progressive torpor, hypotension, hypothermia, hypoventilation, and eventual death [8].

Then we describe a case of myxedema coma in a middle-aged Ugandan woman with no previous history of hypothyroidism. To date, there have been no published reports of myxedema coma in Uganda or, more broadly, in sub-Saharan Africa. We present what we believe to be the first proven case of myxedema coma in western Uganda. The case highlights the significance of early recognition and operation of this rare life-hanging exigency, indeed in resource-limited settings where access to advanced diagnostics and ferocious care may be confined.

2. Case Report

A 46-year-old lady from Uganda arrived at the emergency room complaining of bewilderment and lethargy over the previous two days. Over the last three months, her family said, she had grown more reclusive and sleepy. Her medical history was once normal, with no previous opinion of a thyroid complaint. On examination, She had a 9/15 Glasgow Coma Scale score throughout the assessment, indicating that she was sleepy and confused. Her palpitation was 48 beats per minute, her blood pressure was 85/50 mmHg, her respiratory rate was 10 breaths per minute, and her temperature was 32.5°C. Physical examination revealed dry skin, pitting edema on the legs, and delayed relaxation after deep tendon revulsions. The thyroid gland wasn't palpable.

Original examinations showed severe hypothyroidism with thyroid stimulating hormone (TSH) of 118 mIU/L (normal range 0.4–4.2 mIU/L), free thyroxine (FT4) of 0.35 ng/dL (normal

range 0.8–1.8 ng/dL), creatine kinase of 2356 U/L, sodium of 128 mmol/L, and a white blood cell count of 3 x 109/L. The chest x-ray and electrocardiogram were normal. An opinion of myxedema coma was grounded on the constellation of altered internal status, hypothermia, bradycardia, and laboratory substantiation of severe hypothyroidism.

The case was admitted to the ferocious care unit and started on treatment with intravenous levothyroxine
500 mcg daily, hydrocortisone 50 mg every 8 hours, unresistant rewarming, and cardiorespiratory monitoring. Over the coming seven days, she recaptured her full knowledge. Repetition thyroid function tests showed enhancement with TSH 32 mIU/L and fT41.2 ng/dL. She was transitioned to oral levothyroxine (100 mcg daily) and discharged in stable condition. On follow-up after one month, she was euthyroid on a levothyroxine relief remedy.

3. Discussion

Myxedema coma is an endocrine emergency with a high threat of mortality if not honored and treated instantly. It represents the extreme incarnation of long-standing undressed hypothyroidism(9). Prepping factors include old age, womanish coitus, downtime season, infections, cerebrovascular events, medicines, and cold exposure(10). In this case, the pouring factor was unclear. She had no egregious infections or exposure to cold temperatures. Still, it's likely that she had long-standing undiagnosed hypothyroidism leading to profoundly low thyroid hormone situations and myxedema coma.

The opinion of myxedema coma requires a high indicator of dubitation in any case presenting with altered internal status, hypothermia, bradycardia, and hypoventilation. Myxedema coma is a clinical opinion, as no single laboratory parameter is individual. Still, a TSH above 20 mIU/L and a T4 below 0.7 ng/dL in a case with suggestive clinical features con rm the opinion(10).

Early institution of treatment is pivotal, as the mortality rate approaches 80–100 if left undressed(8). The keystones of treatment include thyroid hormone relief, corticosteroids, treatment of pouring illness, rewarming, and cardiorespiratory support. Thyroid hormone relief is stylishly achieved with intravenous levothyroxine at an original dose of 400–500 mcg daily. This leads to rapid- re relief of circulating thyroid hormone, as demonstrated in our case. Once the case is stabilized, oral levothyroxine is initiated and the case is covered nearly completely to avoid relapses.

4. Conclusion

Myxedema coma is a rare life-threatening crisis of untreated hypothyroidism. Increased awareness of this condition and prompt initiation of treatment with levothyroxine, steroids, and supportive care are often life-saving. Therefore, even in settings with limited resources, myxedema coma should be taken into account in the differential diagnosis of any patient presenting with hypothermia, altered mental status, and bradycardia.

Declarations

Research Ethics And Patient Consent

The patient's lawful representative provided explicit written consent for the publication of their medical information and accompanying images.

There are no declared conflicts of interest with this study by the authors.

Acknowledgments

None

Conflicts of interest

Not applicable

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