

# A Case of Respiratory Failure Due to Myxedema Coma

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## ABSTRACT

An 80 year old female was brought into the emergency department with loss of consciousness and not responding to pain, she had history of altered consciousness for 2 days, 1 episode of fever and vomiting. On presentation, her vital signs were heart rate of 64 beats per minute, blood pressure reading of 80/40 mmhg, spo2 of 80%, and gcs-3/15. Her ABG showed pco2 of 79mmhg and was intubated for respiratory failure and started on inotropic infusion for low BP. On examination, patient was found to be morbidly obese, had macroglossia, and per orbital edema. Lab investigation showed thyroid stimulating hormone of 31.76  $\mu$ IU/ml. The patient was diagnosed with myxoedema coma and was started on higher dose of thyroid supplements and IV steroids. Over the next week the patient regained consciousness and improved dramatically.

**Key words:** Myxedema coma, Respiratory failure

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On examination, patient had pallor, b/l pitting pedal edema, hypothermic and GCS of 3/15. Crepitations were heard diffusely in the bilateral lung fields and abdomen was distended.

## INTRODUCTION

Myxedema coma is profound hypothyroidism with depressed mental status, hypothermia, and other symptoms like decreased function in multiple organs [1]. It has high morbidity and mortality rate. Fortunately, it is now become a very scarce manifestation of hypothyroidism [2], because of early diagnosis as the thyroid function test blood investigations have become quite easily available now days. Early examination, testing, diagnosis and treatment of myxedema coma are needed. Treatment need to be started just based on clinical history, examination and suspicion without expecting the lab results. An important pointer that shows the likelihood of myxedema coma in a patient with poor response is thyroidectomy scar presence or a patient with radioiodine therapy or hypothyroidism history.

## CASE REPORT

80 years old morbidly obese female was brought into the emergency department with loss of consciousness and no response to painful stimuli. She had history of altered sensorium since 2 days. She had history of breathlessness grade IV (MMRC) since 2 days. History of fever, vomiting and abdominal distension the previous day.

Patient is a K/c/o hypothyroidism, systemic hypertension and COPD not on regular follow up and not compliant with treatment. Patient had carcinoma cervix 5 years ago for which chemotherapy and radiotherapy were done.

## DISCUSSION

Patient was intubated in view of Low saturation and gcs of 3/15. Investigations showed elevated total count of 12410 cells/ cumm, ABG - pCo2 of 79mmHg, TFT showed TSH of 44 mIU/ml, total T4 of 3.47 mcg(4.6 - 12.0), RFT shows urea 58mg/dl, Creatinine 1.7 mg/dl, USG Abdomen showed right pleural effusion, cultures were negative, echo showed normal LV systolic function. TFT showed hypothyroidism and patient was hypothermic, constipated and her reflexes were sluggish hence we came to a diagnosis of myxedema coma. Patient was started on IV levothyroxine 500 mcg stat followed by 100 mcg daily, IV hydrocortisone and other supportive management, patient regained consciousness and improved dramatically [3-5].

## CONCLUSION

Myxedema coma is a manifestation of hypothyroidism in its extreme form which could be life threatening with very high morbidity and mortality if left unchecked and untreated. Myxedema crisis is seen in elderly patients, females commonly and, presents with various signs and symptoms hypothyroidism, hypothermia, hypoxemia, hypercarbia and hyponatremia. If there is any delay in testing, diagnosis and treatment it could lead to a poor prognosis. Patient needs intensive care support with constant attention to ventilation, hypotension, steroid supplementation and thyroid supplementation. So early clinical diagnosis in myxedema coma without waiting for TFT is vital as the mortality is 20% or higher.

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