**Myxoedema coma- a case report**  
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**Introduction:**  
Myxoedema coma represents a severe form of hypothyroidism with mortality exceeding 20% even with optimal treatment. We present a case of myxoedema complicated by Type 2 respiratory failure and the difficulties encountered in its management.

**Case report:**  
A 74 year old lady, who was previously well, was admitted with feeling lethargic, confused and decreased mobility for 3 weeks. She was drowsy and had distended abdomen with absent bowel sounds. Investigations revealed gross hypothyroidism with TSH < 0.01 mU/L(0.27-4.20 mU/L) and T4 >100 pmol/L (12-22 pmol/L), acute renal failure and type 2 respiratory failure. Abdominal X-ray revealed distended bowel loops indicating ileus. She was supported with artificial ventilation in the intensive care unit. Triiodothyronine and hydrocortisone were given intravenously and thyroxine through nasogastric tube. After an initial period of detoriation with infective diarrhoea, her condition and biochemistry improved gradually. Subsequent CT scan of the abdomen showed enlarged and inflamed bowel loop which was managed conservatively.

**Discussion:**  
Myxoedema coma is a rare but life threatening condition which occurs due to severe deficit in the thyroid hormones resulting in collapse of the metabolism. The condition is typically seen in elderly women gradually progressing over months to years. In our case, the duration of symptoms was short and the progression was rapid, although it is possible that our patient might not have sought medical attention despite her symptoms. She developed respiratory failure rapidly, soon after the admission, requiring ventilatory support. Respiratory failure requiring mechanical ventilation may indicate a poor prognosis. Treatment must be initiated promptly in the intensive care setting. The route of administration of thyroid hormones is debatable. Again, whether the replacement should be with thyroxine, triiodothyronine or both, remains controversial. We used intravenous and nasogastric route in view of severity of the presentation and suspected intestinal obstruction. Historically the mortality rate was quoted as high as 80%, however with adequate supportive treatment this can be reduced to 20%. Old age, bradycardia, persistent hypothermia, altered sensorium and sequential organ failure are some of the predictors of poor outcome.

**Conclusion:**  
Early recognition and prompt treatment with thyroid hormone replacement and ventilatory support in the intensive care setting are crucial in the management of this potentially fatal condition.