**LIFE-SAVING PERICARDIOCENTESIS IN A PATIENT WITH MYXOEDEMA COMA AND LARGE PERICARDIAL EFFUSION**

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| **Introduction:** The occurrence of myxoedema coma is relatively infrequent, but the complications can be life-threatening if not treated accordingly. We reported a case of myxoedema coma with cardiac tamponade and bilateral pleural effusion in our centre.  **Case Description:** A 58-year-old female presented with altered mental sensorium and dyspnoea for two weeks. She had total thyroidectomy for thyroid cancer but defaulted her levothyroxine medication for 20 years. In the emergency department, her Glasgow Coma Scale (GCS) was 13/15. She was normotensive but oxygen saturation was 50% under room air. She was intubated for type 2 respiratory failure and subsequently required vasopressor support. Point-of-care ultrasound showed bilateral pleural effusion and pericardial effusion. Pericardiocentesis was done and 120 ml of straw-coloured fluid was aspirated. Another 500 ml of pericardial fluid was aspirated in the intensive care unit. Her thyroid function test exhibited hypothyroidism, with thyroid stimulating hormone of 26.4 miU/L and free T4 of 3.2 mIU/L. She was started on levothyroxine and extubated on day 6 of admission. Her condition improved gradually and was discharged well after 27 days of hospitalisation.  **Discussion:** The prevalence of pericardial effusion in severe and chronic hypothyroidism is about 80%. The gradual onset of effusion allows the pericardium to stretch and accommodate a large amount of fluid without causing tamponade. Mechanical ventilation increases intrathoracic pressure and may exaggerate the tamponade effect, leading to life-threatening shock. Although myxoedema-associated pericardial effusion can resolve with thyroid replacement therapy alone, emergent pericardiocentesis is warranted if there are signs of tamponade.  **Conclusion:** The indication for therapeutic pericardiocentesis in chronic pericardial effusion is greatly determined by haemodynamics and careful clinical judgement instead of the volume of the effusion alone. The threshold for pericardiocentesis will be lower in intubated patients due to a higher risk of haemodynamic compromise. Further studies and specific clinical guidelines are needed to tackle myxoedema-associated pericardial effusion. |

**Keywords:** Cardiac tamponade, myxoedema coma, pericardiocentesis