

Cardiac tamponade as the first manifestation of primary hypothyroidism

Tamponada serca jako pierwszy objaw niedoczynności tarczycy

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A 61-year-old woman was admitted to the Emergency Department (ED) with head injury and loss of consciousness. Despite the severe injury she was in a clinically stable condition. Physical examination showed general swelling (including the pretibial, abdomen, and face region). Moreover, dry, coarse skin and total hair loss was observed. The patient presented poor memory and concentration, but she was alert and oriented. Clinical examination revealed blood pressure (170/100 mm Hg), heart rate 60/min, and regular respiratory rate 25/min with 94% oxygen saturation. There was neither pulsus paradoxus nor engorged jugular. Lungs were bilateral, and heart sounds were muffled. On abdominal examination, hepatomegaly and a pathological mass were found. The patient was sent for head, thorax, and abdominal computed tomography (CT), which revealed no post-injury changes in the brain except for subgaleal haematoma. Abdomen CT showed hepatomegaly and large nodular mass in the pelvic cavity. Chest examination revealed the following: bilateral pleural effusion and cardiomegaly with massive pericardial effusion depth above 6 cm (Fig. 1). Cardiac consultation with bedside echocardiography showed large pericardial effusion all around the heart, with right ventricular collapse (Fig. 2). The patient was transferred to the Cardiac Surgery Department with the diagnosis of cardiac tamponade. Urgent pericardial drainage was performed and 1000 mL of yellow-coloured fluid was obtained initially in the operating theatre and a further 2200 mL on the ward. Thyroid function tests revealed a thyroid stimulating hormone level at 60 mIU/mL and free T4 at 0.00 ng, which was significant for the diagnosis of primary hypothyroidism with high thyroid stimulation. After successful management of the cardiac tamponade the patient was sent for further endocrine investigation. It is well known that patients with hypothyroidism can develop a protein-rich pericardial and/or pleural effusion. However, cardiac tamponade as the initial presenting feature is extremely rare. The presented case shows that a patient with hypothyroidism may not present the classic symptoms of cardiac tamponade. Chen et al. [Am J Emerg Med, 2010; 28: 866–870] and shows that the incidence of newly diagnosed primary overt hypothyroidism among adults admitted through the ED is 0.1%. Nevertheless, our case highlights the importance of well performed anamnesis and physical examination while evaluating patients and reminds us to include hypothyroidism as the differential diagnosis in uncommon cases.



Figure 1. Chest computed tomography; bilateral pleural effusion, cardiomegaly with massive pericardial effusion depth > 6 cm

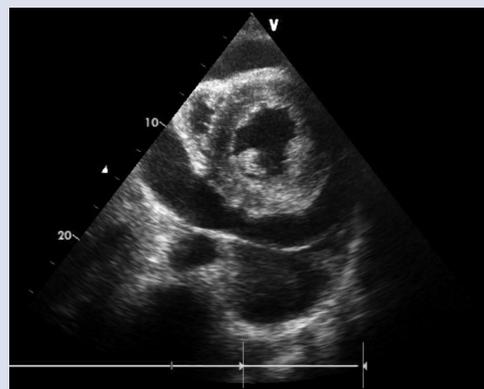


Figure 2. Parasternal short-axis view of the heart at the level of the papillary muscles showing the pericardial effusion

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