A rare cause of oedema

Szu-Chun Hung¹ and Der-Cherng Tarng²

¹Division of Nephrology, Taoyuan Veterans Hospital and ²Division of Nephrology, Department of Medicine, Taipei Veterans General Hospital, Faculty of Medicine, National Yang-Ming University School of Medicine, Taipei, Taiwan

Keywords: lymphoedema; non-cardiogenic pulmonary oedema; oedema

Case history

An 82-year-old man had progressive oedema and dyspnoea. His past medical history was notable for sick sinus syndrome, for which he had received a pacemaker 3 years earlier. A chest radiograph showed pulmonary oedema with a normal cardiac silhouette (not shown). Massive pleural effusions developed, as shown on repeat chest radiograph 2 months later (Figure 1). He had marked ascites and swelling of the scrotum and legs. Diagnostic evaluations including laboratory tests and imaging techniques had been...
exhausted, but the cause of his anasarca remained unclear. Much to everybody’s surprise, thoracocentesis yielded a chylous effusion which was negative for cytology and cultures, raising the suspicion of a problem with the lymphatic system. Lymphoscintigraphy disclosed poor lymphatic flow in the lower extremities (Figure 2), a finding consistent with primary lymphoedema.

Incompetence of lymphatic drainage results in interstitial protein accumulation and increased oncotic pressure, which draws fluid out of the circulation and leads to non-cardiogenic pulmonary oedema. Loss of effective volume accounts for avid fluid retention, which further aggravates the oedema. The chylothorax could be caused by progressive lymphatic atrophy and leakage of chyle into the pleural cavity. Despite a medium-chain fatty acid diet and diuretic therapy, repeated chest tappings were needed to control the rapid reaccumulation of his pleural effusions.

Conflict of interest statement. None declared.