Chylous ascites and chylothorax due to the existence of transdiaphragmatic shunting in an adult with nephrotic syndrome

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Case

Chylous ascites is a well-known complication of severe nephrotic syndrome. However, the coexistence of chylous ascites and chylothorax is rarely reported in adult nephrotic syndrome [1].

A 66-year-old man was diagnosed with nephrotic syndrome 10 months before, presenting with progressive anasarca, dyspnea, abdominal fullness, persistent heavy proteinuria, and a 10.5 kg body weight gain. The pathology of his nephrotic syndrome revealed membranoproliferative glomerulonephritis. For symptomatic relief, right-side thoracentesis and paracentesis were performed and showed chylous ascites (Figure 1) and chylous effusion with triglyceride levels of 394 and 97 mg/dl, respectively, which were negative for cytology and culture. To determine whether communication existed between the peritoneal and pleural cavities, 6 mCi 99 mTc-macroaggregated albumin (MAA) was injected into the peritoneal cavity.

Radioactivity was visualized in the right thoracic cavity 5 min later (data not shown) and increased in the following hour (Figure 2), a finding consistent with shunting existing between the abdomen and right thorax. The pathogenesis of chylous ascites in nephrotic syndrome is unknown, but hypoalbuminaemia-induced bowel oedema may be a predisposing factor. Chylothorax is not a usual result of nephrotic syndrome; however, if chylothorax was identified from an abdominal source, surgical exploration of the chest for diagnosis could be avoided. This patient demonstrated by means of a nuclear scan that the chylothorax was secondary to the transdiaphragmatic movement of chylous ascites and confirmed the existence of shunting between the peritoneal and thoracic cavities; however, this mechanism is uncertain, and it

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may be through diaphragmatic defects [2]. To our knowledge, this is the fifth reported case of chylothorax from chylous ascites in a nephrotic syndrome [1]. Interestingly, the chylothorax in these reported cases occurred in adults and only in the right side.

Conflict of interest statement. None declared.

References