

Cardiac tamponade with chylopericardium caused by periprocedure lymphatic injury: A case report

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Chylopericardium is a rare condition caused by accumulation of chyle within the pericardial sac. It is often incited by secondary cause such as thoracic duct injury, infection, malignancy, and radiotherapy. We report a case of massive chylopericardium presenting cardiac tamponade caused by repeated replacement of hemodialysis catheter. A 68-year-old woman undergoing hemodialysis through perm catheter was referred to our outpatient clinic due to pleural effusion. Her catheter has been replaced several times due to recurrent intraluminal thrombus. She also had history of radical mastectomy and axillary lymph node dissection because of breast cancer, and underwent chemotherapy and radiotherapy from 2017 to 2018. The pleural fluid showed milky appearance, and ratio of protein level between pleural fluid and serum was greater than 0.5, suggesting exudative fluid by light criteria. The fluid was also notable for elevated triglyceride (1064mg/dL) and low cholesterol (69mg/dl), suggesting chylothorax. Chest radiograph after two months showed recurrence of pleural effusion and cardiomegaly. Echocardiogram revealed pericardial effusion with diastolic collapse of right ventricle and her vital signs were blood pressure of 98/62mmHg, heart rate of 130/min, suggesting cardiac tamponade. Emergent percutaneous catheter drainage of the pericardium was performed, and chylous fluid was obtained, confirming chylopericardium. Positron emission tomography was performed and we could exclude recurred breast cancer and other malignancy. Lymphangiography found no evidence of chyle leakage; nonetheless, an empirical embolization was performed, considering possibility of thoracic duct injury according to her recurrent catheter replacements. After embolization, echocardiogram showed resolved pericardial effusion, and she was discharged. Pericardial effusion in patients with dialysis is often associated with uremia or, less often, with malignancy. This report presents a rare case of chylopericardium and suggests that the possibility of chyle leakage should be considered in patients with risk of underlying thoracic duct injury, such as surgery, malignancy, and some other procedures.

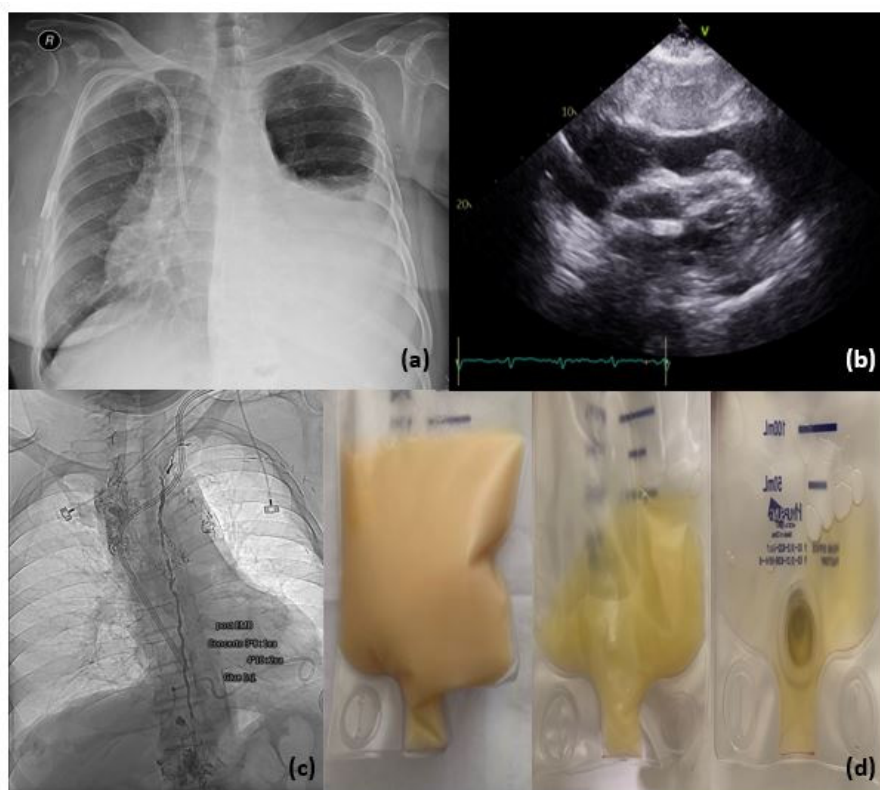


Figure 1. (a) An initial chest radiograph revealed massive pleural effusion (b) Echocardiogram demonstrated the cardiac tamponade (c) Lymphangiography and embolization (d) pericardial fluid drained showing milky white fluid