

Forgotten Chemo-Port Leading to Chylothorax: A Rare Presentation

*Pradeep Bajad¹, Avinash B¹, Naveen Dutt¹, Ram Niwas¹, Parwan Kumar Garg²,
Pushpinder Khera², Nishant Kumar Chauhan¹*

¹Department of Pulmonary, Critical Care & Sleep Medicine, All India Institute of Medical Sciences, Jodhpur, Rajasthan (India);

²Department of Diagnostic & Interventional Radiology, All India Institute of Medical Sciences, Jodhpur, Rajasthan (India)

To the Editor,

Chylothorax is an uncommon cause of pleural effusion in routine clinical practice. Thoracic surgery, trauma and malignancy are the leading causes of chylothorax accounting for more than 90% of cases (1,2). We report this rare case of a middle aged lady with treated carcinoma breast who presented with left-sided chylothorax secondary to subclavian vein and superior vena cava thrombosis caused by a longstanding indwelling chemo-port in the right internal jugular vein. Patient was managed on total parenteral nutrition (TPN) leading to complete resolution of chylothorax.

Patient had progressive breathlessness and swelling of both arms and hands. She was diagnosed with left breast ductal carcinoma two years back for which lumpectomy with axillary lymph node dissection was performed. A chemo-port was placed in the right internal jugular vein because of difficulty in accessing peripheral veins and need for multiple chemotherapy cycles. She received her last chemotherapy cycle one year back following which the chemo-port was left in-situ. Chest radiograph revealed massive left sided pleural effusion. Milky appearing fluid was aspirated during diagnostic thoracentesis. Pleural fluid analysis confirmed a chylothorax. A pigtail pleural catheter was inserted in the left pleural space. Over the next two days, two liters of pleural fluid was drained. Contrast-enhanced computed tomography (CECT) of thorax (Figure 1) revealed post lumpectomy changes, mild left-sided pleural effusion, thrombus in brachiocephalic,

bilateral subclavian, internal jugular veins and superior vena cava (SVC) with pig tail catheter in left pleural space. Therapeutic anticoagulation was initiated using enoxaparin. Vascular surgery and catheter guided radiologic interventions were not possible because of chronic thrombus in multiple large veins.

Magnetic resonance lymphangiogram did not reveal any leak or obstruction in the thoracic duct. Chemo-port was removed. Patient was advised a fat-free and high-protein enteral diet. Octreotide was also administered but had to be discontinued due to multiple episodes of vomiting and diarrhea. About 600-800 ml of chyle was evacuated every alternate day to relieve dyspnea. Patient was then initiated on TPN. At the end of three weeks, chyle collection stopped and the pig-tail catheter was removed.

Some of the non-traumatic causes of chylothorax include sarcoidosis, amyloidosis, cardiac failure and superior vena cava thrombosis (3,4). Vascular thrombus leading to chylothorax has rarely been reported. Some of these cases are related to parenteral feeding via venous catheters while others are non-catheter related (5). Dietary changes, TPN, octreotide, thoracic duct ligation or embolization, pleuro-peritoneal shunt and pleurodesis are the major treatment options. Low fat medium chain triglycerides are directly absorbed into portal circulation bypassing the lymphatic system (6). Decreasing fat intake leads to decreased chyle output due to decreased fat absorption from the intestine.

Risk factors for catheter-related thrombosis include larger, multi-lumen and peripherally inserted

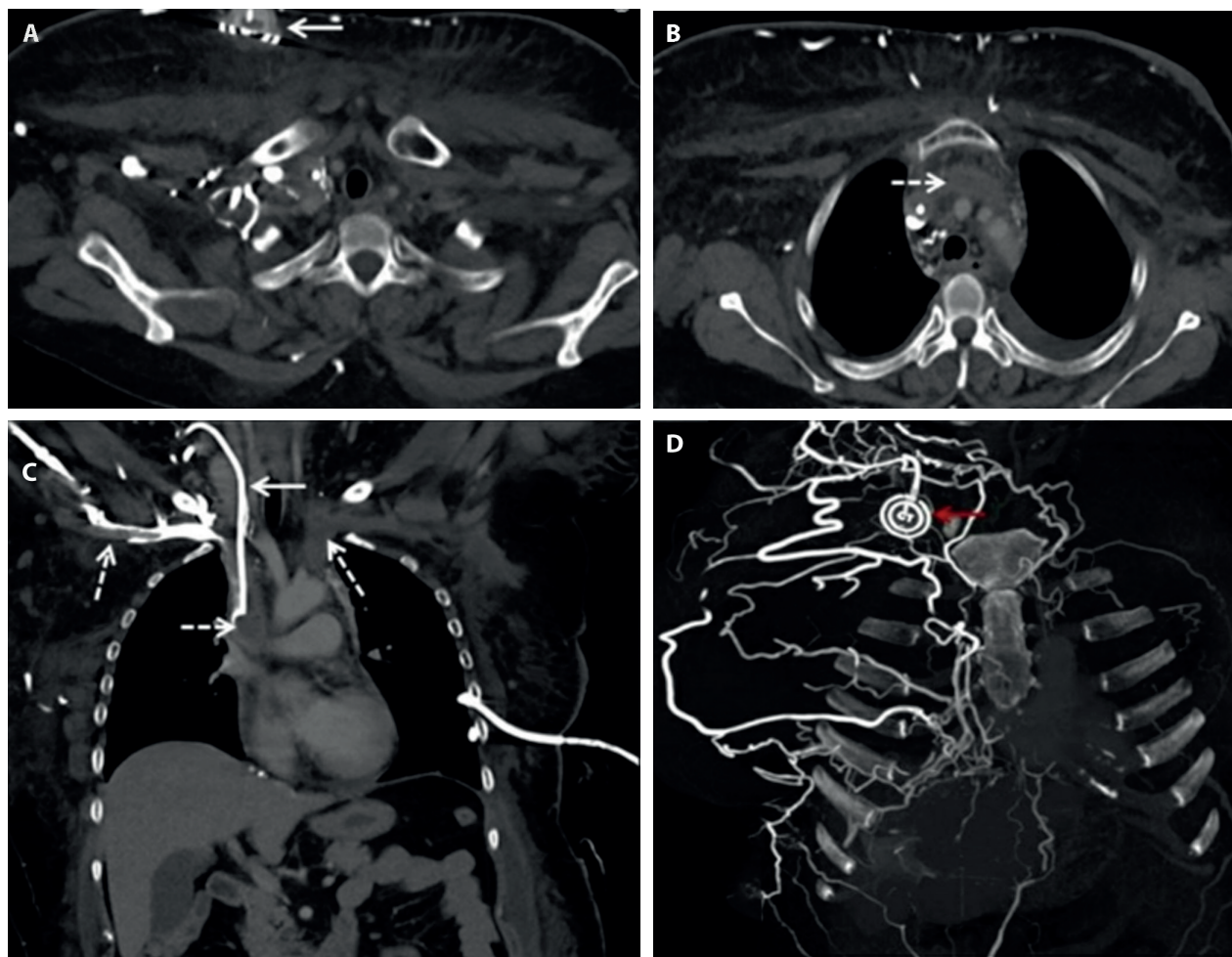


Figure 1. Contrast-enhanced computed tomography (CECT) chest in axial (A, B) and coronal (C, D) plane, showing chemo-port placed in the right anterior chest wall with the tip of catheter reaching up to SVC (white arrow in A, C). The hypodense filling defect is seen to suggest thrombus in brachiocephalic vein, bilateral subclavian, internal jugular veins, and SVC (dashed arrow in B and C). Mild left-sided pleural effusion is seen with a pigtail catheter placed in situ (C). Maximum intensity projection (MIP) images are showing chemo-port (red arrow) with multiple chest wall collaterals (D).

catheters in patients with cancer receiving chemotherapy. Persistent venous catheter leads to increase chances of thrombus formation in large veins and that subsequently may cause chylothorax. Conservative management is generally recommended in most of the non-traumatic causes with surgical approach being reserved for large/persistent leaks.

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Correspondence:

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Nishant Kumar Chauhan, MD

Department of Pulmonary, Critical Care & Sleep Medicine

All India Institute of Medical Sciences

Jodhpur, Rajasthan (India)

Phone: 918003996884

E-mail: nishant97@gmail.com