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LETTERS TO EDITOR

CHYLOTHORAX AFTER CHILDBIRTH IN A MOTHER

Sir,

Chylothorax is the most common type of neonatal pleural effusion,^[1-3] but a Medline search revealed only three case reports of chylothorax after childbirth in the mother.^[4,5]

A 32-year-old woman presented with dyspnea 11 days after normal vaginal delivery. She had no history of recent obvious trauma or constitutional complaints. Physical examination revealed a healthy-appearing female without peripheral lymphadenopathy, palpable spleen or anemia. There was dullness over one-third of left hemithorax base with diminished breath sounds. Chest roentgenogram showed left pleural effusion. Thoracentesis yielded milky fluid. Analysis documented chylous nature of fluid with a protein level of 6.8 g/dl, triglycerides 562 mg/dl, cholesterol 7.0 mg/dl, glucose 98 mg/dl and LDH 116 IU/l. The fluid white blood cell count was 6,300/cu.mm with 98% lymphocytes. Fluid was negative for malignant cells and acid fast bacilli. She rejected any evaluation due to poor socioeconomic condition.

After 32 months, she accepted the request for revisit, and new chest X ray and CT scan [Figure 1] showed left pleural effusion that in comparison with previous X ray extended to right hemithorax. Ultrasonographic examination confirmed the fluid nature of both sides' opacities. Thoracentesis and analysis of the pleural effusion confirmed again the presence of chylothorax.

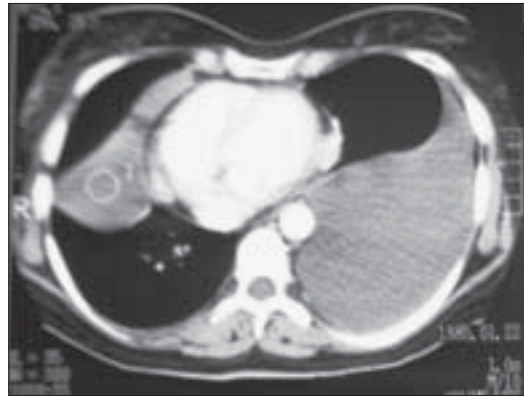


Figure 1: Chest CT scan shows left-sided effusion with extension to right side

DISCUSSION

Tornling *et al.*^[4] reported the first case of chylothorax after delivery and described its mechanism as follows: 'During labor throes, there is initially an increased intrathoracic and intra-abdominal pressure followed by a rapid decrease to negative intrathoracic pressure with persistent high intra-abdominal pressure. In the thoracic part of the duct, high stretching forces thus occur on the ductal wall due to high intraluminal and low extraluminal pressure.'^[4]

In two previous reports, chylothorax was found after prolonged vaginal delivery where extensive external pressure was applied to the abdomen.^[4,5] However, in our patient, no external pressure was applied to the abdomen.

More than one possible etiology of chylothorax may be present, such as occult mediastinal lymphomas or lymphangiomyomatosis; however, no signs of mediastinal lymphoma

or parenchymal involvement were seen in CT scan after 3 years.

With chylothorax, the main dangers to the patient are malnutrition and a compromised immunologic status caused by the removal of large amounts of protein, fat, electrolytes and lymphocytes.^[1,2] Chyle is bacteriostatic, so complication by empyema is rare. However, the presence of chyle causes a gross pleural reaction, which becomes greatly thickened and covered by exudates. This can lead to loss of chest-wall and lung-parenchymal function.^[2]

Management strategies of chylothoraces are (1) maintaining nutrition and reducing the chyle flow with parenteral hyperalimentation and low-fat diet (Octreotide, a somatostatin analogue, has been reported to be effective in hastening the closure of thoracic duct leak); (2) relieving dyspnea by removing the chyle by repeated thoracentesis or tube thoracostomy and pleuroperitoneal shunts; (3) closure of the defect with chemical pleurodesis, lymphatic embolization and blockade and video-assisted thoracoscopic surgery (VATS).^[1,5]

In summary, this is a report of chylothorax after childbirth, with its relatively benign course.

MOHAMMAD HOSSEIN RAHIMI-RAD

Department of Respiratory Medicine, Urmia University
of Medical Sciences, Urmia, Iran

Correspondence:

Dr. Mohammad Hossein Rahimi-Rad, Bronchoscopy Unit,
Imam-Khomeini Hospital, 57157-81351, Urmia, West
Azerbaijan, Iran. E-mail: rahimirad@umsu.ac.ir

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