Chylothorax In Nonhodgkin Lymphoma Treated By Left Cervical Lymphadenoidectomy
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Citation

Abstract
The accumulation of chyle in the pleural space (chylothorax) is a rare condition. Its causes include obstruction of the thoracic duct (congenital or acquired), injury (mainly iatrogenic especially cardio-thoracic procedures) and idiopathic reasons when no cause can be found. The acquired obstructive causes are malignant or non malignant. Lymphomas and other intrathoracic tumors can cause obstruction by invasion or external pressure. (1,2)
Treatment principle is to treat the cause if found or treat its effect such as pressure (3)
We think that the long course of the thoracic duct to which chyle is directed has an impact on the management of chylothorax in some cases. We present this patient in which the cause is obstruction to emphasize the importance of knowledge of the anatomy.

CASE REPORT
A 60 years Libyan female patient presented to the chest hospital in Benghazi with breathlessness, left sided chest pain, cough loss of appetite and feeling feverish for the last one month. She was operated one month before her presentation on an incisional hernia developed in Kocker’s incision for cholecystectomy five years back.
Clinically: her pulse: 80 beats/minute regular, Bp:180/70mmHg, temperature: 36.5˚C.
She was mildly short of breath, slightly pale and not jaundiced. The left supraclavicular lymph nodes were enlarged. No enlargement of lymph nodes in other locations.
Chest examination revealed signs of left sided pleural effusion. Examination of the abdomen revealed a recent surgical scar in the right hypochondrium. There were no masses and no organomegally. Routine investigations: HG 10.7gr%, WBC 12,000 cells/cmm, eosinophils 13%, ESR 103 in first hour. Electrolytes: Na 131mEq/l, K 4.5mEq/l, urea 45mg%, creatinine 1.5mg% total protein: 6g/l Ca 8.2mg% Liver function tests were normal. Serological tests: HbsAg, HCV and HIV were negative.
Chest X-ray showed left sided pleural effusion (fig1, 2).
Abdominal ultrasound ruled out any masses or organomegally. CT scan of the chest showed the effusion (fig3, 4) and no masses were seen. An initial pleural aspiration was done and it was thick and milky in color and sent for laboratory analysis: triglycerides 771mg/dl, cholesterol 93mg/dl total fat 7g dl, WBC 7500 cells/cmm (neutrophils 2%, eosinophils 57%, lymphocytes 41%)(fig5).

Figure 1
Figure 1: Chest X-ray
Figure 2
Figure 2: Post-aspiration chest X-ray

Figure 3
Figure 3: Cat scan chest

Figure 4
Figure 4: Cat scan chest

Figure 5
Figure 5: Pleural fluid

Intercostal chest tube was inserted and the patient put on total intravenous fluids allowing only sips of water from time to time. The tube was draining 1000cc of chyle each day. Left supraclavicular lymph nodes were taken for biopsy. Under general anesthesia a left supraclavicular incision was done and the subcutaneous fat and platysma were entered. The lymph nodes 7 in number were rubbery in consistency found to occupy the whole area up to the trachea where a large one was wedged behind the sternocavicular joint.

The histopathology report giving the diagnosis of non-Hodgkin’s lymphoma (fig 6,7).

On 21/1/2003 the drainage was reduced to 100cc/day then stopped completely.
DISCUSSION

The thoracic duct is the continuation of the cisterna chyli, a lymphatic dilatation that starts in the abdomen and passes upwards through the aortic diaphragmatic opening between the aorta and the azygos vein. It ascends upwards on the right side of the aorta and right posterior to the esophagus on the thoracic vertebral bodies. At the level of T4 thoracic vertebra it turns to the left and ascends with the esophagus to the neck. At C7 cervical vertebra it arches laterally and then downwards in front of the scaleneus anterior muscle to open with single or multiple branches in the commencement of the left brachiocephalic vein where it is formed by the left subclavian and internal jugular veins (4).

In most reports the management is concentrated on treating the cause by chemotherapy and radiation especially in lymphomas in order to stop the leak of chyle in the first instance (5, 6). This is true in most cases but in some cases the lymph nodes are enlarged in left supraclavicular area, which is accessible for excision (5). In our patient we found removal of these lymph nodes is therapeutic as well as diagnostic avoiding many procedures such as different methods of Pleurodesis (7) shortening the time of leak and the dietary changes and helps to concentrate on the main cause and its treatment (8).

We usually refer our patients to the hematology or the oncology departments and unfortunately we loose them for follow up.

References
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