Chylothorax after Esophagectomy

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A 50 year old man, nonsmoker was evaluated for progressive swallowing difficulty and loss of weight of two weeks duration. His upper GI endoscopy showed a large mass in the middle third of the esophagus. Endoscopic biopsy revealed a squamous cell carcinoma. The patient underwent transthoracic esophagectomy under general anesthesia. On removing the adherent tumor the descending aorta was injured and he developed hypotension, internal hemorrhage and later cardiac arrest. He was resuscitated by volume replacement, ventilation, inotropes and other supportive measures. Postoperatively, he developed hypoxic ischemic encephalopathy and was admitted to the neurology ward.

However, two weeks later, his right sided pleural drain had a milky color (Figures 1 and 2). He was investigated by X ray chest (Figure 3) and CT thorax (Figure 4) which showed right pleural effusion. The pleural fluid which was milky white colored had a triglyceride level of 617 mg/dl and Sudan III stain was positive for fat globules. He was treated with right sided chest tube drainage, parenteral hyperalimentation and gradually the drainage stopped after a few weeks.

Reviewing the literature, chylothorax has an incidence of 2% after esophageal carcinoma resection and has a mortality of 46% if untreated. Injury to the thoracic duct can occur in any type of esophageal resection. Chylothorax can be managed conservatively or by surgical intervention with double ligation of the thoracic duct above and below the severed portion. Supportive treatment should be commenced immediately to prevent fluid, electrolyte and protein imbalance. If the chyle leak exceeds 1500 ml/day, early operation is advisable. Small chylous leaks may heal spontaneously and the volume can be monitored using a chest tube.

References