Case Report

An entero-pleural fistula referred as a case of right sided lung Abscess

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ABSTRACT

We report a case of a 65 year old male patient referred from Prince Haya Military Hospital to King Husain Medical Center (KHMC) as a case of right sided lung abscess. The preoperative diagnosis of entero-pleural fistula was made by the help of thoracoabdominal MRI after a six months of unfruitful management. The patient did well after laparotomy and complete excision of the fistula. (Rawal Med J 2012;37:217-219).

Key words

Entero-pleural fistula, empyema, lung abscess.

INTRODUCTION

In 1987, Ronald L. Richterman reported a case of jejunopleurobronchial fistula and he mentioned that he found another similar case by reviewing the literature. We present a
case of entero-pleural fistula presenting as a case of lung abscess, and we could reach the correct diagnosis of this patient after months of a challenging management.

CASE PRESENTATION

A 65 year old male patient, a known case of colonic Gastrointestinal stromal tumor for which he underwent emergency left hemicolectomy in June, 2006 due to splenic flexure colonic perforation. Patient was referred from Prince Haya Military hospital to KHMC as a case of right sided lung abscess on November 11, 2009. He was complaining of right sided pleuretic chest pain, dyspnea and cough of two months duration, chills and rigors of 3 days duration.

Fig 1. Air fluid level in lung abscess.

Ches X-ray (Fig 1) and chest and abdominal CT-scan (Fig 2) showed right lower lobe air –fluid level indicating the presence of lower lobe abscess.
Intravenous antibiotics were initiated and drainage under CT-scan was performed. After the drainage of the abscess (75 cc), patient showed significant clinical improvement and was discharged home. He was re-admitted two weeks later under the care of pulmonologist as a case of chest infection, received IV antibiotics for one week, improved and was discharged.

Thereafter, he remained stable for eleven weeks till March 3, 2010 when he was referred again complaining of pleuretic chest pain, spiking fever and discharging chest wall wound that failed to respond to conservative treatment. Right thoracotomy was performed on March 20, 2010 and we found extensive adhesions between the lung and chest wall with pleurocutaneous fistula draining pus at anterior chest wall.

We resected the lower lobe abscess and excised the pleurocutaneous fistula. On the 2nd postoperative day, he started to produce pus through chest tube at 200cc/day. Suspicion of intra-abdominal cause of the pus was raised but the abdominal U/S and CT scan were reported to be negative. After three weeks post thoracotomy, a follow up chest CT-scan
showed loculations and thickening of the pleura with entrapment and collapse of the right lung.

Fig 3. MRI showing enterocutaneous fistula.

A decision was taken to decorticate the right lung on April 11, 2010 which succeeded to expand the right lung well and patient was discharged on April 20, 2010. On May 8, 2010 he was readmitted again with chest pain cough and pleural effusion, so a small pore right pleural catheter was inserted, effusion was sent for culture which showed heavy pure growth of E. coli. This raised the suspicious of intraabdominal cause again, so a chest and abdominal CT-scan with oral contrast was done which supported the suspicious of enteropleural fistula. A thoracoabdominal MRI was done and we could confirm the diagnosis (Fig 3). On May 23, 2010 patient underwent laparotomy by the colorectal team and they found a small bowel mass like structure attached to the right hemi diaphragm and connected to the right pleura with small fistula.
They excised the bowel mass structure and the fistula completely and restored the small bowel continuity by primary anastomosis. The patient did well and was discharged on June 1, 2010 in good condition and expanded right lung.

**Fig 5. CT scan showing complete resolution.**

He was seen in outpatient clinic in regular visits with uneventful course and a chest CT scan done on Nov 1, 2010 (Fig 4) showed complete resolution of the pleural disease.

**DISCUSSION**

Pleural space may communicate pathologically with gastrointestinal tracts in the form of esophagopleural fistula, gastroleural fistula, colopleural fistula or small bowel pleural fistula. Although the diaphragm is a strong barrier that separate between pleural and abdominal cavities, in certain situations it might lead to escape of a fistulous tract formation like in cases of trauma, malignancy, subdiaphragmatic infection, post radiation and viscous perforation.²,³

In such pathology, a relevant history, nature of pleural fluid drainage, type of microbes isolated in culture and radiological investigations most of the time lead to a proper
diagnosis. In our case, the long delay between bowel surgery and presentation, the absence of fecal content of pleural drainage, the delay of positive pleural fluid culture of E. coli, the negativity of early abdominal U/S and CT scan, beside the absence of apparent fistula during decortications mislead us and delayed the correct diagnosis. Radiological investigations like upper GI series, chest and abdomen CT scan and thoracoabdominal MRI have a valuable role in diagnosing enteropleural fistula. Also, the presence of positive E. coli culture and fluctuation of pleural catheter output in relation to oral intake, Sister Leena’s sign⁴ may point out to a hidden fistula. In summary, GI Pleural fistula must be remembered as a possible cause of refractory cases of empyema.

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REFERENCES


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