Stop: Think - Pleural Effusion

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A 75 year old lady attends the hospital with a 6 months history of progressive dyspnoea. Prior to her symptoms she could walk over 1 mile on the flat, however now she can only walk a few hundred yards. There is no history of cough, haemoptysis or chest pain. She also gave a history of abdominal discomfort off and on. Her bowel movements have not changed. She has never smoked and in the past apart from having cataract surgery has never been to hospital. Examination of her respiratory system reveals decreased breath sounds on the left side with dullness on percussion. Abdominal examination reveals fullness below the umbilicus.
Her chest x-ray is shown below (Figure1).

a) What is the abnormality shown in the Chest X-ray?
b) List 5 different conditions that may present similarly?
c) What investigations will you request?

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Figure 1

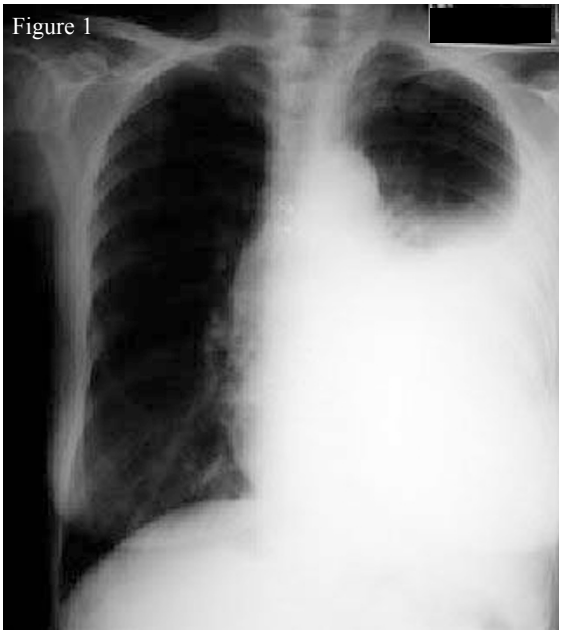

Figure 2

Answer:

a) There is a left pleural effusion.
b) Malignancy primary or secondary, Pneumonia, Tuberculosis, Pulmonary embolism, Connective tissue disorders may present with pleural effusions and mesothelioma.
c) Routine blood tests
Diagnostic pleural aspiration to see if the fluid is an exudate or transudate and to look for evidence of any malignancy. Malignant pleural effusions are exudates.
If pleural aspiration is negative for malignant cells, pleural biopsy should be done.
Ultrasound or CT of the abdomen and pelvis.

Routine blood tests were normal. Pleural aspiration confirmed it to be an exudate and pleural biopsy confirmed the presence of adenocarcinoma. A CT scan of the abdomen and pelvis is displayed (Figure 2).

What is the diagnosis?
Answer:
A huge pelvic mass is seen arising from the right ovary.

Diagnosis:
Ovarian cancer with metastatic left pleural effusion.

Learning Points:
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MEIGS-SALMON SYNDROME:

Patients with benign ovarian tumours may develop bilateral pleural effusions. This syndrome was initially described by Salmon in 1934 and again in 1937 by Meigs and Cass in patients with ovarian fibromas in the presence of ascites and hydrothorax. The syndrome is now known to be caused by a wide variety of primary pelvic neoplasms including fibroma, thecoma, granulosa cell tumours, Brenner tumours, cystadenomas, adenocarcinoma and even extra-ovarian pelvic tumours such as fibromyoma of the uterus. The ascites is due to the secretion of large amounts of fluid by the tumour. Pleural effusions may be massive. They are most frequent on the right side (70%), however they may be on the left side or bilateral (20%). The pleural fluid is usually a transudate but may contain blood. The pleural effusion probably results from ascitic fluid passing through pores in the diaphragm into the pleural space. Removal of the pelvic tumour is usually followed by the disappearance of the pleural effusion and ascites. ■