

A Case of Isolated Spleen Metastasis from Carcinoma Lung

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Abstract

Case Report

Metastasis of lung carcinoma to spleen is a rare event and mostly diagnosed either at the time of splenectomy or autopsy [1]. Spleen is considered a poor soil for tumor deposits firstly because presence of high population of immune cells and secondly due to production of angiogenesis inhibiting factors which account for the rarity of metastasis to spleen. Spleen metastases are more common from a primary cancer of left lung than the right [2].

Keywords: lung carcinoma, splenectomy, metastasis.

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INTRODUCTION

18.4 % of total cancer related deaths is attributable to lung cancer. Lung cancer is responsible for 14.2% of neoplasms in men and 7.4% in women [3]. The current 5-year survival rates for men are 15% and for women, 18%. Metastasis of lung carcinoma to spleen is a rare event and most commonly diagnosed on autopsy.

CASE REPORT

A 55 year old male presented with complaints of pain in left upper abdomen since 2 months dull aching, gradual, continuous, radiating to left shoulder and decreased on medication. Associated with breathlessness, hemoptysis and fever with chills and rigors. Weight loss of 8kg in last 2 months. No history of trauma in past or any complaint of similar history in past. Under CT guidance (in private hospital) 2 pigtail were placed in left upper abdomen with 50cc output stat from it and was discharged with pigtail in-situ which was kept for 3 week. Daily average output was 10cc only. On examination, left lower zone air entry was decreased, fullness in left hypochondrium with tenderness. No signs of free fluid in abdomen. Peristalsis - normal. Clinically Splenic abscess rupture was suspected. CBC showed Leukocytosis with Neutrophilia. Chest X-Ray showed blunting of CP angle below (Fig 1).



Fig-1: Chest X ray shows blunting of CP angle

On USG abdomen spleen was of normal size. Two intercommunicating thick wall collection with internal echoes seen in relation to upper pole of spleen approx. 31x43mm and 53x54 mm which appears to communicate to the left pleural cavity with possibility of old splenic abscess communicating to left pleural cavity and also moderate fluid in left pleural cavity.

In CECT abdomen & pelvis (Fig 2), A 13x10x16 cm irregular ABSCESS was seen in relation to: Upper pole of spleen, Lower lobe of left lung, left dome of diaphragm, Left upper psoas muscle, Intercostal muscles in 11th and 12th intercostal space. Erosion of body of left transverse process of L1 vertebrae and 12th rib with extension into extra-Dural space at L1 level.

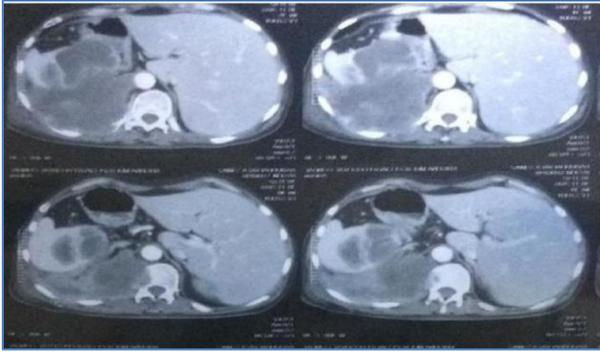


Fig-2: CECT abdomen and pelvis: Abscess seen in relation with upper pole of spleen. Left lung, diaphragm, psoas muscle and intercostal muscles

Patient was managed conservatively for 7 days with intravenous antibiotics and was latter operated in planned OT for Open Splenectomy. Intra-operative findings: -

- 100cc granular material was drained from under dome of left diaphragm and hard walled cavity was present under left dome extending into thorax suspected to be calcification.
- Spleen was adherent to stomach, left kidney and also the splenic flexure of colon from which it was separated carefully leaving behind a wall of collection adherent to the stomach wall.
- Tail of pancreas was identified.
- There was no communication into pleural cavity confirmed by positive ventilation.
- Romo-ADK 32 placed. The spleen was sent for Histopathological examination. On basis of this finding patient was suspected to have calcified hydatid cyst in Spleen which was ruptured. Tablet Albendazole was started in post-operative course. Persistent drain output of approx. 200cc of dirty fluid was noted.

On Histopathological Report: GROSS (Fig3): Received spleen measuring 6 x 3.8 x 3.2 cm³. O/S: brownish. C/S: brownish. One whitish well capsulated area with cystic foci and areas of necrosis identified near one end and one yellowish white nodule measuring 0.6 x 0.4 x 0.2 cm³.



Fig-3: Spleen gross with cystic foci and areas of necrosis

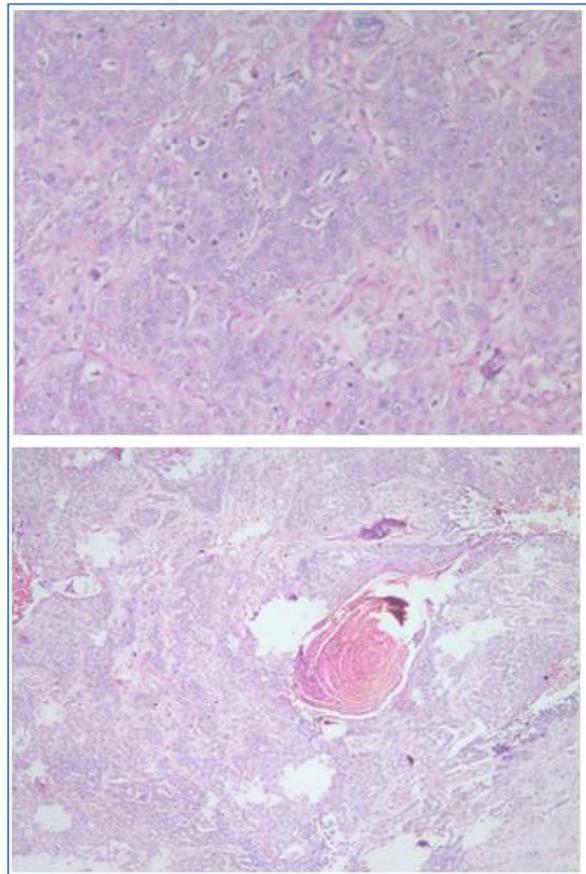


Fig-4: Metastatic Keratinizing Squamous Cell Carcinoma with congested splenic parenchyma and marked neutrophilic infiltration of red pulp

Multiple sections were taken from the whitish area, nodule, and grossly unremarkable areas of spleen and also from the hilum. Tissue was processed in automated tissue processor and stained with Hematoxylin and eosin method.

MICROSCOPY (Fig 4): Sections from whitish area and nodule show histology of spleen with Metastatic Keratinizing Squamous Cell Carcinoma to Spleen with congested splenic parenchyma and marked neutrophilic infiltration of the red pulp.

CECT Thorax (Fig 5)

- 10x11x18 mm heterogeneously enhancing mass in basal segment of left lower lobe of lung involving

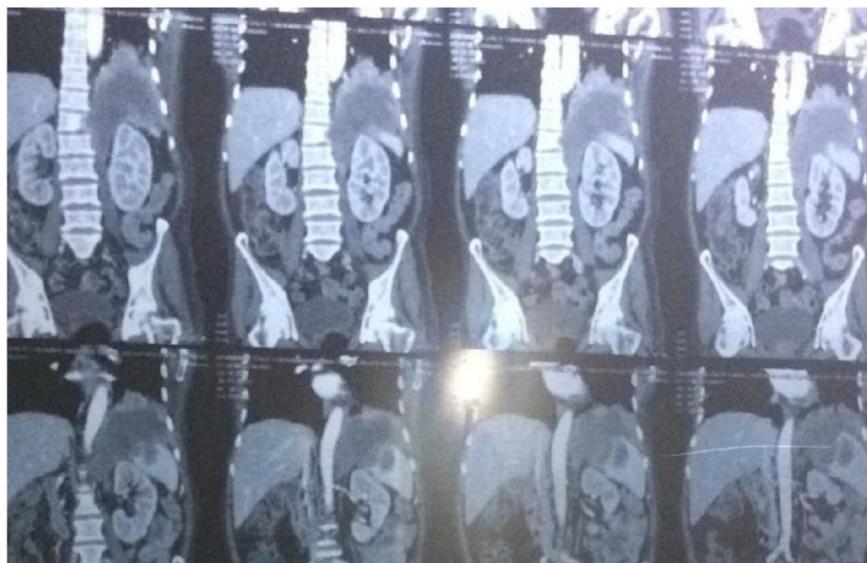


Fig-5: CECT Thorax shows mass in basal segment of left lower lobe of lung extending into spinal canal. Multiple retroperitoneal lymph nodes are enlarged.

Diagnosis: primary malignant mass in lower lobe of left lung

DISCUSSION

The spleen has generally been considered poor soil for tumor deposits, probably because of the high population of immune cells and its role in immune surveillance. Skeletal muscle and spleen despite receiving a high percentage of cardiac output and having large vascular beds are rarely the sites for secondary deposits [4]. The production of angiogenesis-inhibiting factors is another explanation for the rarity of splenic metastases [2]. They are not usually suspected at presentation and are generally diagnosed after splenectomy or at autopsy. The prevalence ranges between 2.3% and 7.1%, is usually diagnosed at the time of autopsy, and is associated with other intraabdominal metastases.

Curiously, splenic metastases are more common from a primary cancer of the left lung than the right [1]. Pulmonary adenocarcinoma was seen most often in isolated splenic metastasis, followed by squamous cell carcinoma. Large cell undifferentiated carcinoma, poorly differentiated carcinoma, and carcinoid tumor can also cause isolated metastasis to the spleen [2]. Management has to be individualized and

the costal, mediastinal and diaphragmatic pleura involving the left dome and crus of left diaphragm involving 10th to 12th left rib and extending into spinal canal at D12-L1 level. Lesion involves left psoas muscle.

- Multiple retroperitoneal lymph nodes enlarged with few of the pretracheal and subcarinal nodes also enlarged.

splenectomy offered to patients with otherwise favorable primary tumor features and absence of dissemination. In patients where the primary tumor is itself unresectable or in the presence of disseminated disease, treatment is aimed at palliation of symptoms [5]. The important point is that, in patients who are otherwise considered for curative treatment for the primary, the presence of a splenic lesion should alert the clinician to the possibility of metastasis and the final treatment plan should consider this.

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