Case Report

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Splenic Metastasis: Really Rare?

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Abstract

Spleen is an uncommon site of tumor metastases, usually as a part of multivisceral metastatic disease. Breast, lung, ovarian, colorectal, and gastric carcinomas and skin melanoma are the most common primary sources. Isolated metastasis to the spleen is extremely rare especially from lung with only 8 cases reported to date in literature. Splenic metastasis is often asymptomatic and radiologically mistaken for primary splenic lesions. Hence clinical suspicion and pathological confirmation is essential with careful and extended follow up for prompt therapeutic intervention. Here we report a rare case that presented with abdominal symptoms and massive splenomegaly and revealed isolated splenic metastasis from moderately differentiated adenocarcinoma in left lung.

Keywords: Splenic metastasis; Adenocarcinoma of lung.

Introduction

Spleen is an infrequent site of tumor metastases in spite of it being the most vascular organ. Most splenic metastases are a part of multivisceral metastatic disease. Breast, lung, ovarian, colorectal, and gastric carcinomas and skin melanoma are the most common primary sources. Occurrence of splenic metastasis in literature is 0.3% to 7.3%[1] however the incidence of isolated splenic metastasis ranges from 0 to 26% of all patients with splenic metastases.[2] Majority are asymptomatic. There have been only eight cases of isolated splenic metastasis due to lung carcinoma in the English literature to date.[2] Here we report a rare case of isolated splenic metastasis from adenocarcinoma in left lung.

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Case History

A 40 year old female patient was admitted in our hospital with complaints of abdominal distension since 5 months, associated with

Figure 1A: Gross Irregular and Nodular External surface

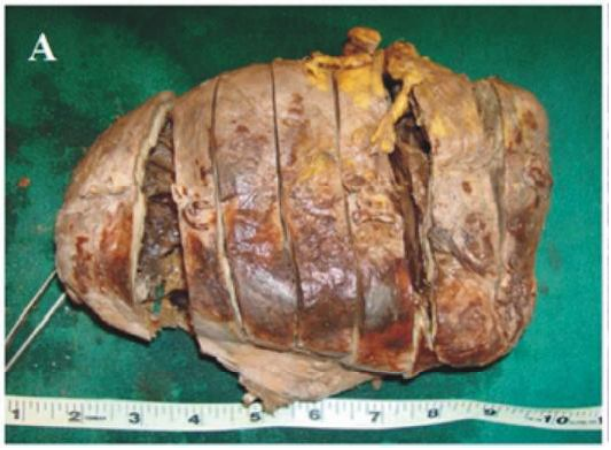
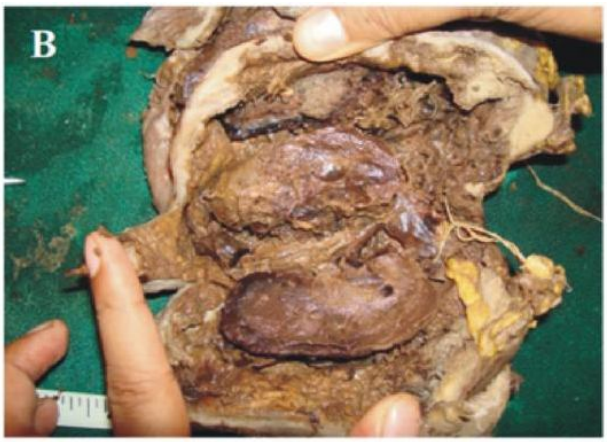


Figure 1B: Gross Solid and cystic Areas on Cut Section



abdominal pain and infrequent diarrhoea. She was poorly built and pale. Per abdomen examination revealed massive splenomegaly and engorged abdominal veins. Chest X-ray revealed mild haziness in left lung and ultrasonography of abdomen showed a huge splenic cyst. Splenectomy was done

Grossly, spleen measured 17x 15 x 6 cms with irregular nodular surface and containing a cyst of size 15x10x6cms with solid areas in between. Microscopy showed tumour cell nests both in solid areas and in cyst lining. Both revealed features of moderately differentiated adenocarcinoma.

On further investigations, primary in left lung was confirmed by CT and FNAC findings.

Discussion

Splenic metastasis occurs late in the course of disseminated cancer, most- commonly from the lung, GI tract and breast, and is usually detected only at autopsy.[3] The relative paucity of splenic metastases is thought to be related to 1) Lack of afferent lymphatics; 2) The sharp angle made by the splenic artery which makes it difficult for large clumps of tumor emboli to enter the spleen; 3) The rhythmic contractile nature of the spleen, which squeezes out the tumor embolus; 4) Antitumor activity due to high concentration of lymphoid tissue in the spleen.[1]

Although most patients with splenic metastases are clinically asymptomatic, there have been reports of painful splenomegaly, splenic vein thrombosis, and splenic rupture, making diagnosis and prompt therapeutic intervention important.[2] Our case too presented with abdominal symptoms and massive splenomegaly. Splenic metastases were more common in elderly males. In a study by Lam *et al* symptomatic lesions were often seen in women and younger patients [1] as in our case. A recent review uncovered approximately 40 cases of isolated splenic metastasis from all sources with 8 cases from lung. Primary is usually found in left lung perhaps due to preferentially higher blood flow compared to right lung.

Radiologically, metastatic disease frequently affects the spleen in a manner that is indistinguishable from primary splenic lesions. [4] Same error was made in our case where due to lack of suspicion of malignancy it was reported as splenic cyst on ultrasonography. Splenic metastases can present as 3 main macroscopic patterns: macronodular, micronodular, and diffuse.[4] These lesions are often solitary and cystic.[5] On microscopy, tumor cells in splenic metastasis are similar in

Figure 1C: Glandular Arrangement of Metastatic Deposits (H&E 100x)

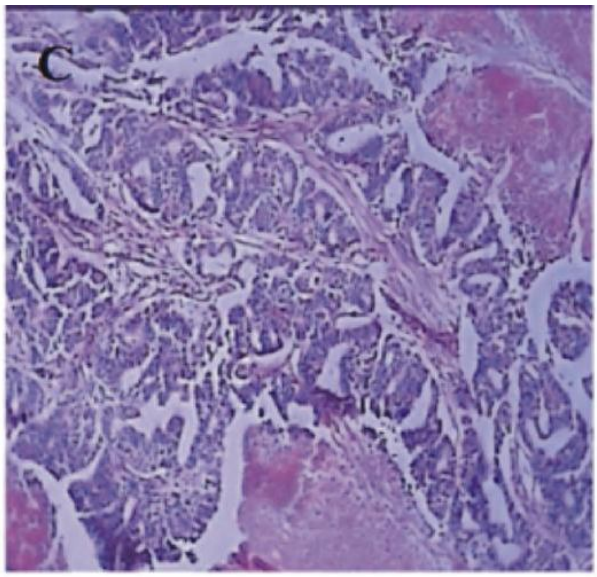
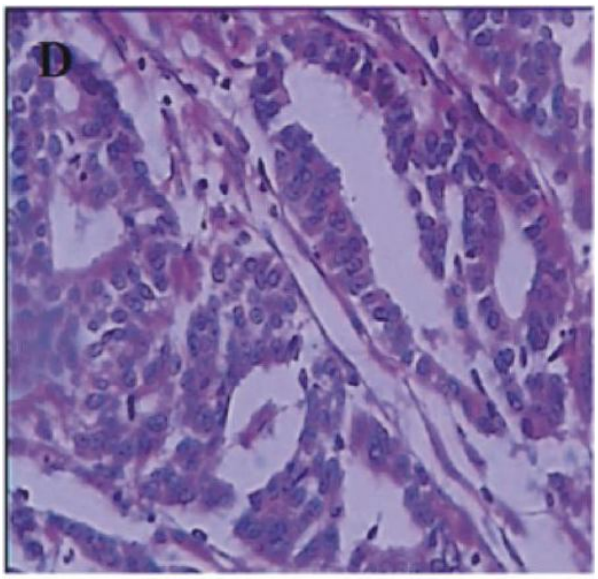


Figure 1D: Cellular and Nuclear Features of Metastatic Deposits of Adenocarcinoma (H&E 400x)



cytology to that of primary tumour.

The majority of splenic metastases are detected simultaneously or shortly after diagnosis of the primary tumor. In this case primary tumour was detected after splenic metastasis of moderately differentiated adenocarcinoma was diagnosed. Large symptomatic lesions usually undergo splenectomy to avoid further metastatic disease, to provide the potential for cure or extended survival, and to avoid the complications like splenic rupture.[2]

Conclusion

Although splenic metastases are thought to be rare, the incidence of reported cases has been increasing due to the improvement of medical imaging and the long-term follow-up of patients with cancer. Radiologically also splenic metastasis can resemble primary lesion hence clinical suspicion and pathological confirmation is essential with careful and extended follow up for prompt intervention.

Key Messages

Splenic metastases are uncommon and often asymptomatic. They are usually detected as part of multiorgan metastases. This rare case presented with abdominal symptoms and massive splenomegaly and revealed isolated splenic metastasis from moderately differentiated adenocarcinoma in left lung. Clinical suspicion and long term follow up is essential for prompt intervention.

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