

LIFE THREATENING HEMORRHAGIC METASTATIC SPLENIC LESIONS REQUIRING EMERGENT SPLENECTOMY IN A PATIENT WITH ADVANCED PANCREATIC ADENOCARCINOMA.

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ABSTRACT

Spleen is said to be the most vascular organ in human body, which seldom is associated with metastasis. Lung was the most common primary carcinomatous site followed by the stomach, pancreas, liver and colon. Rarely reported cases of primary tumor, such as esophageal carcinomas, nasopharyngeal carcinoma, and choriocarcinoma, were found. We present a case of 60 year old female presenting with Hypovolemic shock due to Hemorrhagic Splenic Metastasis with a primary tumor in the Pancreas.

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INTRODUCTION

Although the spleen is said to be the most vascular organ in the body, it is a rare site of cancer metastases [1]. Eighty-seven (95%) of the secondary splenic tumors were carcinomas. Lung was the most common primary tumor site (21%), followed by the stomach (16%), pancreas (12%), liver (9%), and colon (9%) [3]. Rare sources that are reported of primary tumor, such as esophageal carcinomas, nasopharyngeal carcinoma, and choriocarcinoma, were also found. Here we present a 60 year old patient presenting with Hemorrhagic splenic metastases from Primary Pancreatic cancer.

CASE PRESENTATION

This a case of 60 year old female patient with past medical history of pancreatic cancer with multiple pulmonary nodules suggestive of metastasis to lung presented to the ER with complaints of abdominal pain for the last 12 hours. Patient complained of weakness for a few days prior and started having abdominal pain on the day of admission. In the ER she was in acute distress due to the abdominal pain and was found to be in shock with blood pressure running in 70s. She was started on IV fluids and a CT scan of abdomen and pelvis was performed which showed moderate hemoperitoneum along with hemorrhagic metastatic lesions within the spleen and subcapsular liver [fig.1]. She was diagnosed with primary adenocarcinoma of pancreas [fig 2,3] along with areas of lesions on spleen [fig 2] 2 years ago. This corresponded to

exact location of active hemorrhagic lesions seen on the CT scan done at the time of admission, thus indicating foci of hemorrhaging metastatic lesions from primary pancreatic tumor [fig.1]. Patient was also found to have hemoglobin of 5.6g/dl and the platelet count of 50,000. She was transfused with fresh frozen plasma, platelets, and packed RBCs. Intervention radiology was consulted for hemorrhagic metastasis in the spleen who thought it was too advanced to be operated by interventional radiology. General surgery was consulted for splenectomy who performed an emergency splenectomy. Patient tolerated the procedure well and was admitted in ICU for hemodynamic monitoring. The patient is currently undergoing palliative chemotherapy, and she got recent chemotherapy 5 weeks ago prior to admission. The patient is on palliative treatment with gemzar and abraxane.

DISCUSSION

Spleen is said to be highly vascular organ in the body making it a rare site of cancer metastases [1]. Explanations for the relative rarity of splenic metastases are the facts like the sharp angle made by the splenic artery, which makes it difficult for tumor emboli to enter the spleen; the rhythmic contractile nature of the spleen, which squeezes out the tumor embolus and prevents its lodging in the spleen; the absence of afferent lymphatics to bring metastatic tumor to the spleen; and antitumor activity due to a high concentration of lymphoid tissue in

Hasan/Life threatening hemorrhagic metastatic Splenic lesions requiring emergent splenectomy in a patient with advanced pancreatic adenocarcinoma.

the spleen [2]. Besides the above mentioned factors, the frequency of splenic metastases may have been underestimated due to asymptomatic nature of splenic metastases, as the spleen is an internal organ and has a large functional reserve [3]. The metastatic lesions were often seen in elderly patients (mean age, 60 years). Spontaneous rupture of the spleen, secondary to metastatic tumor is exceedingly rare; only 15 cases have been reported previously [4-10]. The cases were more often seen in men (9 men, 5 women, and 1 unknown). The 2 most common primary lesions were metastatic choriocarcinomas and metastatic melanomas. In addition to these lesions, 2 lung carcinomas (1 squamous cell carcinoma, 1 large cell carcinoma), 2 bladder carcinomas (1 undifferentiated carcinoma, 1 signet ring cell carcinoma), and 2 liver carcinomas (1 hepatocellular carcinoma, 1 cholangiocarcinoma) have been reported [3]. Pancreatic adenocarcinoma remains a major health problem, with conventional cancer treatments having little impact on disease course. Almost all patients who have pancreatic cancer develop metastases [13]. The main risk factors for pancreatic adenocarcinoma are smoking, age, and some

genetic disorders like positive K-ras oncogene mutation, although the primary causes are poorly understood [13]. Splenic metastasis occurs late in the background of disseminated cancer like pancreatic tumor and is usually detected at autopsy. Isolated splenic metastasis with no metastasis is extremely uncommon, as in our case where the patient presented with splenic metastasis with a background of pancreatic carcinoma along with previously diagnosed multiple lung nodules on CT chest significant for metastasis. A metastatic lesion of the spleen diagnosed in patients with widespread visceral dissemination of primary tumor has no clinical importance because the overall prognosis of these advanced cancers is generally very poor [11]. However, splenectomy can be performed as a part of palliation with acceptable morbidity in patients with symptomatic splenomegaly with hemorrhagic foci to improve the quality of life [12] as in our patient with past medical history of pancreatic carcinoma with underlying splenic hemorrhagic metastases who presented with hypovolemic shock underwent splenectomy as a part of her palliative management.

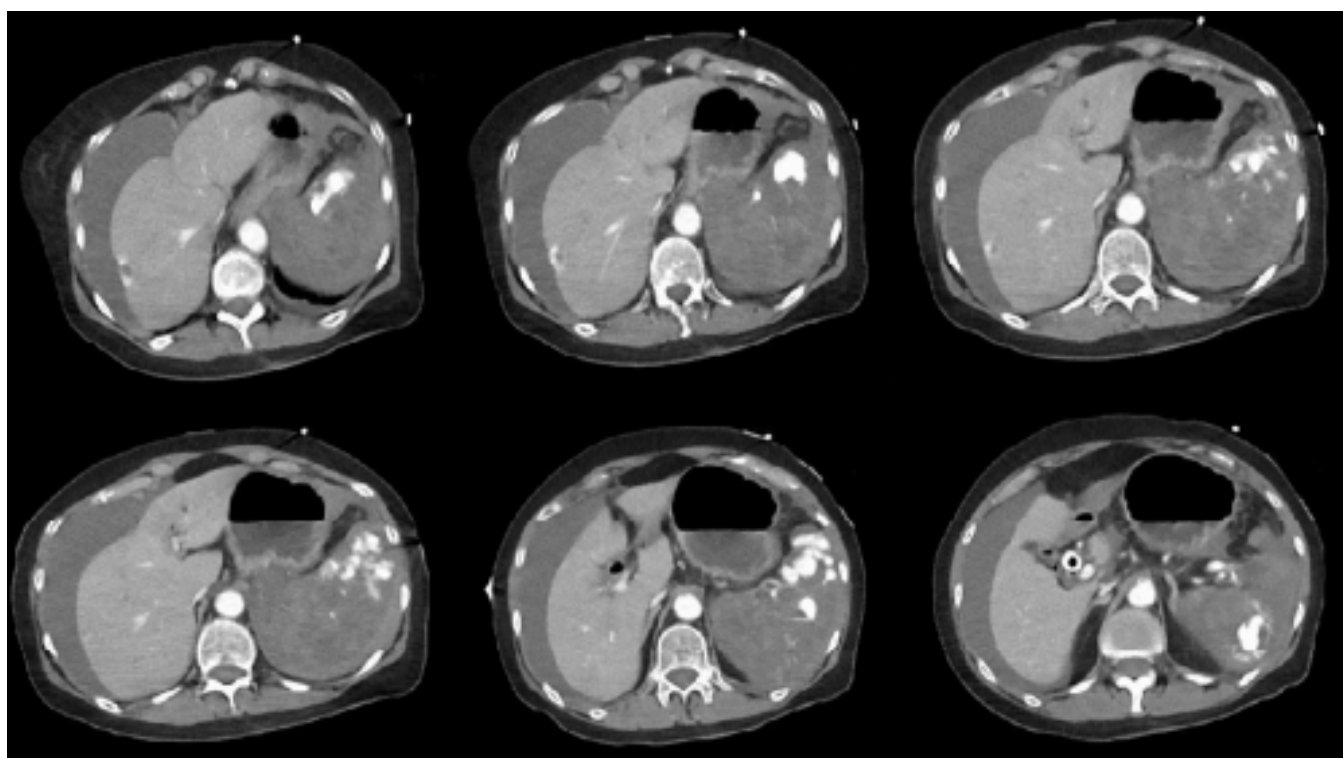
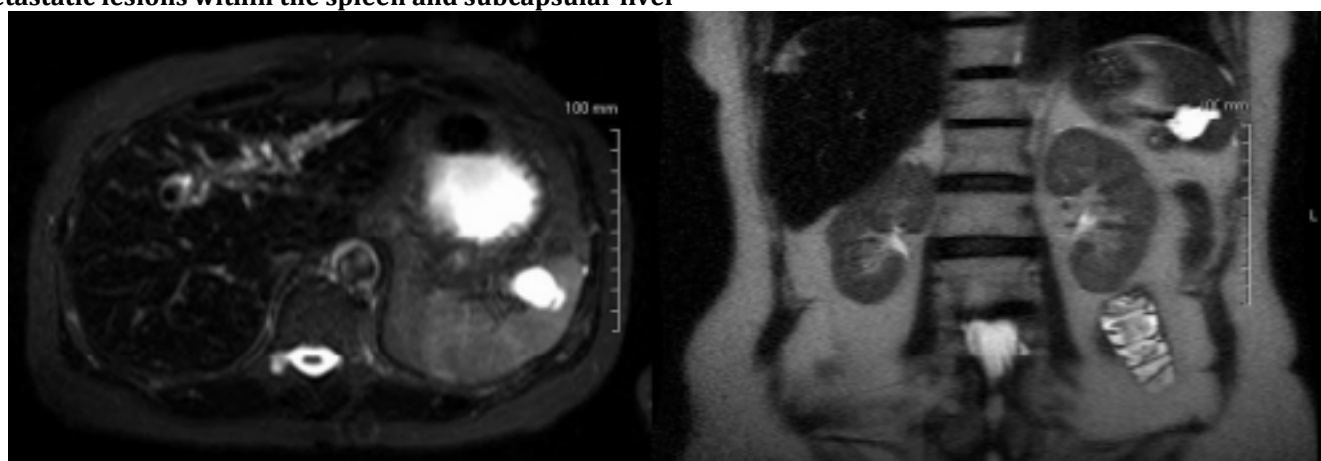


Fig 1: CT abdomen with contrast showed findings of moderate hemoperitoneum and actively hemorrhaging metastatic lesions within the spleen and subcapsular liver



Hasan/Life threatening hemorrhagic metastatic Splenic lesions requiring emergent splenectomy in a patient with advanced pancreatic adenocarcinoma.

Fig 2: MRI abdomen done few weeks ago showed interval development of a new cystic lesion at the junction of the pancreatic tail within the spleen near the splenic hilum.



Fig 3: MRI abdomen done previously showed mass in head of pancreas.

CONCLUSION

1. Splenic metastases is relatively rare entity but should never be neglected in the presence of primary carcinoma in the presence of metastasis elsewhere, like Lung or Liver.
2. Early detection and treatment of Splenic metastasis is of prime importance as it can lead to life threatening complication like hemorrhage, auto splenectomy and hypovolemic shock.
3. Emergent splenectomy in a condition suggestive of highly poor prognosis such as pancreatic adenocarcinoma is acceptable as a part of palliative care to improve quality of life, given the fact that patient is symptomatic.

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