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Twist in a Tale: Metastatic Splenic Lesion in Operated Case of Renal Cell Carcinoma Turned Out to be Lymphangiohemangioma

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1. INTRODUCTION:

Splenic lesion:

Most splenic lesions are detected incidentally, posing a challenge for both interpreting and referring physicians in determining the need for and type of further evaluation. Clinical factors must be taken into account when evaluating a splenic lesion, most importantly pain attributable to the spleen, signs and symptoms of infection, immune status, history of known malignancy, associated findings on imaging of the chest, abdomen or pelvis and a history of abdominal trauma, either recent or remote. Certain laboratory values, such as white blood cell count, can also provide valuable information to narrow the differential diagnosis, the differential diagnosis of focal splenic lesions can be divided into several categories. These include cystic lesions, primary vascular neoplasms, infectious or inflammatory processes, lymphoproliferative disorders, and metastases. Examples of primary neoplasms include hemangioma, hamartoma, lymphangioma, hemangioendothelioma, and angiosarcoma. Cysts of the spleen are the most common benign focal splenic masses.

Splenic metastasis :

Splenic metastasis from solid tumors, defined as parenchymal lesion, are considered exceptional.Neverthless, the number of case reports has been increasing due to the improvement of imaging technique and the long term follow up of patients with cancer. Splenic metastasis occur in a context of multivisceral disseminated cancer or as a solitary lesion. The most common primary sources of splenic metastasis are breast, lung, colorectal and ovarian carcinoma and melanoma in cases of multivisceral cancer and colorectal and ovarian carcinomas in cases of solitary splenic lesion. splenectomy can be replaced by less aggressive methods such as Fine needle aspiration or percutaneous biopsy for establishing the diagnosis of solitary splenic metastasis. The main differential diagnosis are primary lymphoma, vascular tumors and infectious lesion of spleen .The relative rarity of splenic metastasis could be explained by anatomic factors and the inhibitory effect of the splenic microenvironment on the growth of metastasis may result from the growth of an early blood borne micrometastasis following a period of clinical latency, often several years after the diagnosis of the primary tumor.

The prevalence of splenic metastases in large populations with cancer was mainly obtained from autopsy series published before 1990 and ranged between 2.3% and 7.1%.

Splenic lymphangioma:

Lymphangiomas are benign congenital malformations of the lymphatic vessels that manifest mainly in pediatric patients and infrequently in adults. The usual site for lymphangiomas is the head and neck region; however, they can occur in many different body organs, either as a systemic disease called lymphangiomatosis syndrome or as a single organ lesion. Abdominal lymphangiomas accounts for less than 5% of cases. So far, fewer than 100 cases of spleen lymphangiomas have been reported in the literature.

Splenic hemangioma:

Splenic hemangioma is a rare disorder but remains the most common benign neoplasm of the spleen. It often has a latent clinical picture; however, spontaneous rapture has been reported to occur in as many as 25% of this patient population.[1]Treatment most often consists of splenectomy. clinical presentation often latent mostly diasgnosed at autopsy [2].

CASE REPORT:

68 Years old female presented with vague abdominal pain since 3 months,, she was known case of Diabetes mellitus and Hypertension since 10 years on oral medication. She had been operated for renal cell carcinoma, right partial nephrectomy(conventional clear cell renal cell carcinoma, Fuhrmans nuclear grade II) 4 years back .She was on regular follow up, her USG suggestive of area of altered echogenicity at periphery measuring 4.7*4.5 cm and in centre 4.3*4.2 cm in spleen which was gradually increase in size, no other symptoms, all blood investigations were in the normal limits in last 3 months there were one more lesion in spleen, USG guided biopsy done with IHC suggestive of RCC metastasis, section show a vascular lesion with focal tubules having clear cytoplasm which are marked by RCC and vimentin and negative for CD10 and CK, as well as PET CT suggestive of RCC metastasis .Multislice triple phase CT Study reveals, heterogeneously enhancing mass involving the splenic upper pole and lower pole with associated retraction of the splenic capsule, as compared to previous CT, the primary splenic lesion increase in size with new lesion in upper pole . on examination patient was clinically stable, per abdomen soft, non tender patient was advised laparoscopic sos open splenectomy, patient underwent laparoscopic surgery, spleen was enlarged, no peritoneal metastasis seen intra operatively, specimen send for biopsy and histopathology report suggestive of spleen of size 12*9*8 cm with external surface show fibrotic areas, a well circumscribed brownish tumor with fibrotic areas noted measuring 8*8*6.5 cm, the tumor is 0.1 cm from capsule and show proliferating dilated and congested vascular channel and lymphatic channels admist splenic tissue, gamma gandy bodies and interstitial fibrosis, no evidence of malignancy or metastasis, feature suggestive of lymphangiohemangioma, advice IHC studies to confirm. Post operative uneventful Patient discharged on 5thpost operative day, patient was on regular follow up .

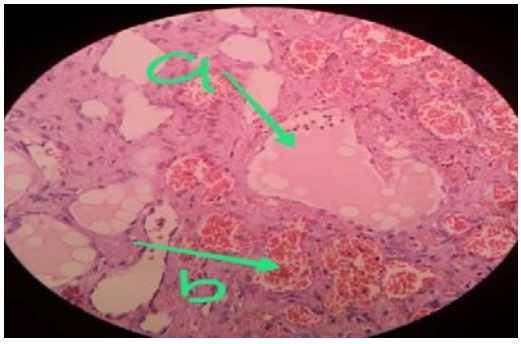

Fig. 1 : Microscopic view of Specimen

a-Lymphangioma b-Hemangioma

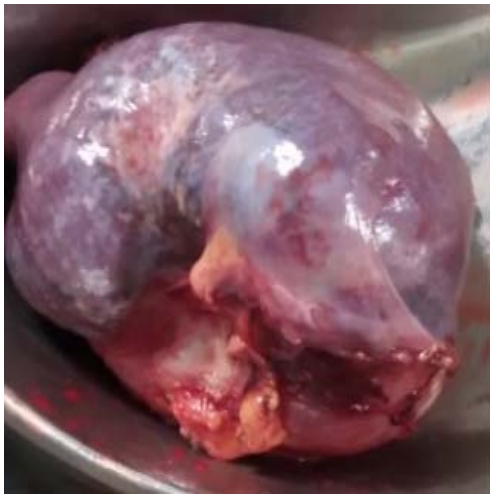

Fig. 2. Gross Specimen.

Discussion:

Patient had right Renal cell carcinoma 4 years back, she was underwent right partial nephrectomy and she was on regular follow up, with follow up USG she had splenic lesion, which was gradually increase in size patient was clinically asymptomatic since till last 3-4 months before surgery then she had intermittent dull vague dull aching abdominal pain, on recent USG there were new splenic lesion, advised usg guided biopsy suggestive of RCC metastasis, she was advised laparoscopic sos open splenectomy, after operation biopsy is suggestive of lymphangiohemangioma.

There is one case in literature, a 22-year-old woman came to the clinic with symptoms of intermittent vomiting and left hypochondrium discomfort over the last 8 months. On examination, she had splenomegaly and congenital bony defects in the form of hypotrophy of the fingers on her left hand. She also had varicose veins and cutaneous capillarymalformations on the right leg, leading to soft tissue hypertrophy and an increase in the girth of the leg. She had a persistent embryologic lateral leg vein. A clinical diagnosis of KTS was made, and duplex scanning of the leg along with a computed tomography (CT) scan of the chest and abdomen was requested. Duplex scanning showed reflux in deep veins, with no evidence of hypoplasia. A contrast-enhanced CT (CECT) scan showed a huge mass replacing the spleen that was compressing the stomach and the left kidney. The patient was taken for laparotomy. Histology of the spleen shows a mixture of dilated lymphatic *(L)* and venous channels *(V)* extensively replacing the splenic parenchyma. A diagnosis of combined lymphangioma/hemangioma of the spleen was made (hematoxylin and eosinstain; original magnification ×100).[3]

Splenic lymphangiohemangioma is rare entity. In literature this was first case suggestive of spleeniclymphangiohemangioma**,** there were one case of

splenic lymphangiohemangioma in known case of Klippel-Trenaunay-Weber syndrome. Another case report suggestive of mediastinallymphangiohemangioma.

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