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Splenic Metastasis - Rare Entity

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Abstract: ***Spleen is rarely the site of secondary tumors. Macroscopically evident secondary tumors are seen in the spleen, in some 4% to 8% of necropsies in cases of cancer. With few published case reports, we report a case of 28 years, female with splenic metastasis and illustrate it with ultrasound(u/s), ct and pathology images. Ultrasound abdomen: on examination carcinoma of ovary was suspected with a complex cystic lesion in the spleen, ct spleen: showed hypodense lesion with specks of calcifications and fine septations. Gross: spleen- showed mild enlargement. Cut section- multiple grey white to grey brown cysts. Microscopy: spleen- keratinized stratified squamous epithelium, dermal adnexae, mature neural elements, glial tissue, mucin secreting columnar epithelium with glandular structures, islands of cartilage and adipose tissue. In the view of previous history of immature teratoma of ovary, to consider it as splenic metastasis from teratoma is obtained.***

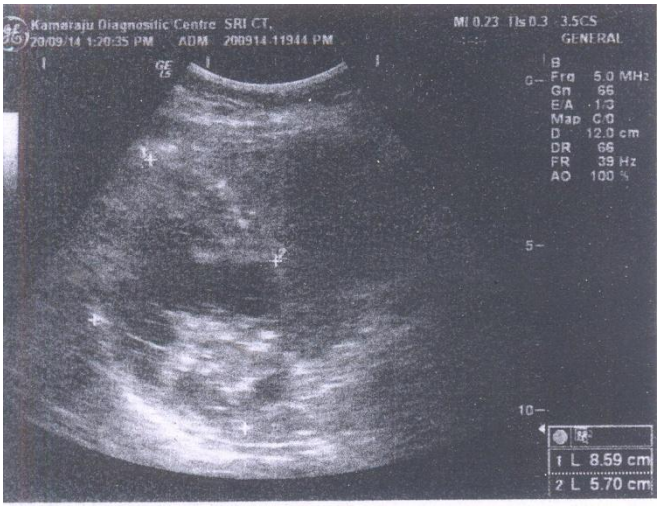
Keywords: immature teratoma-ovary, mature cystic teratoma-spleen, transabdominal scan, cect: contrast enhanced ct scan.

1. Introduction

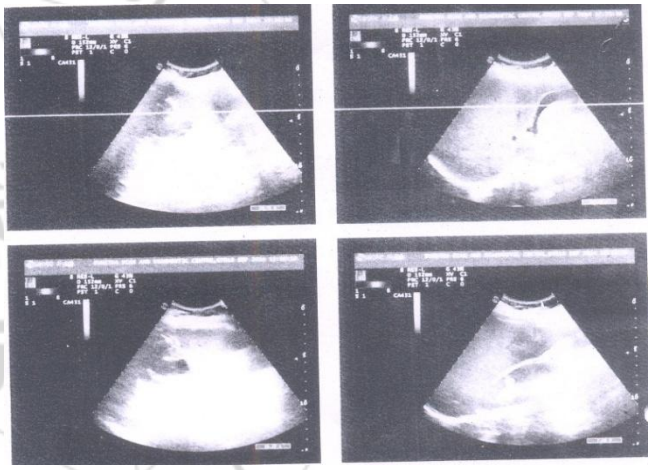
Metastatic tumors involving the spleen are quite rare and are usually discovered on autopsy. Solitary metastasis may present with splenomegaly and may be treated with splenectomy.[1] we present a rare case of splenic matastasis from ovarian teratoma.

2. Case Report

A 28 years old female patient attended surgical o.p. for a cystic lesion in the upper pole of the spleen. There was a previous history of immature teratoma of ovary two years back. Transabdominal scan showed mildly enlarged spleen. A capsulated oval complex heterogeneous echogenic solid cystic lesion was noted in superior pole of spleen with areas of calcifications. Cect-revealed heterogeneous lesion of 8.6x7.6x5.3 cm in superior pole, showing calcific foci and cystic areas with exophytic component.the d.d was metastatic/ angiosarcoma /?? Complex parasitic cyst (hydatid cyst).



Contrast enhanced ct scan



Transabdominal scan

Intraoperatively thick walled sac was seen, adherent to the diaphragm at the upper pole of spleen. Splenectomy was done along with intact sac in the upper pole of spleen. Both the fluid and splenectomy specimen were sent for microscopic examination

3. Morphology

Gross: specimen-1: received 15 ml of straw colored fluid specimen-2: splenectomy specimen was received, size 12x7x5 cm. Cut section-multiple grey white, grey brown cysts of size 5x4x4x cm

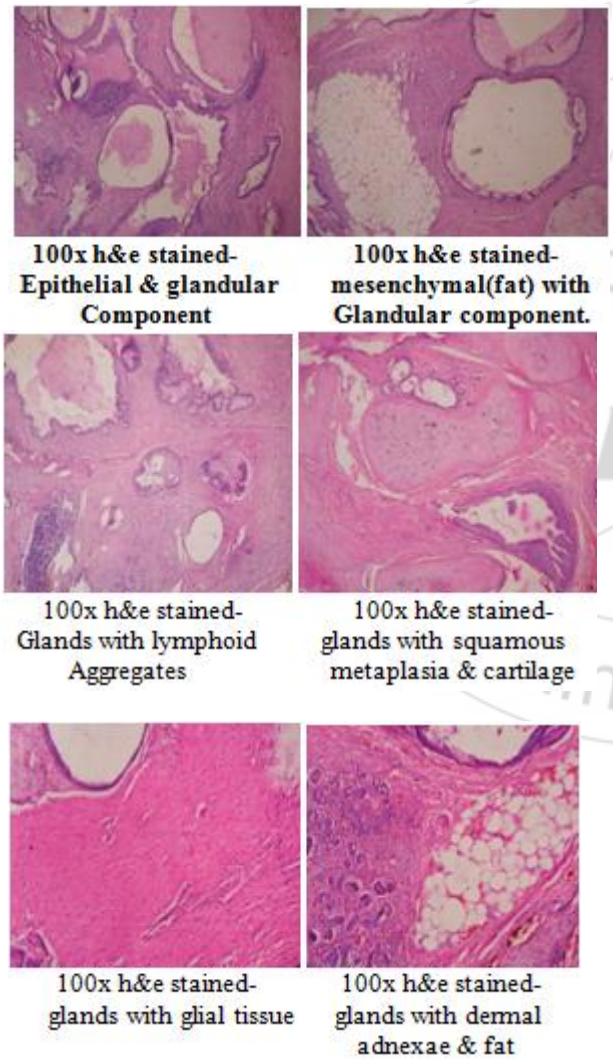
Cut section- multiple grey white, grey brown cysts at the upper pole of spleen

Microscopic Appearance

Specimen-1: fluid- sediment smears showed a few small clusters of polygonal cells along with lymphocytes and macrophages against an eosinophilic background.

Specimen 2: Multiple sections from the splenectomy specimen showed a tumor composed of keratinised stratified squamous epithelium, dermal adnexae, mature neural elements, comprising of glial tissue, mucin secreting columnar epithelium with glandular structures, islands of cartilage and adipose tissue along with nonspecific inflammation and granulation tissue. Immature elements were not seen.

Impression: mature cystic teratoma of spleen (splenic metastasis)



100x h&e stained- Epithelial & glandular Component

100x h&e stained- mesenchymal(fat) with Glandular component.

100x h&e stained- Glands with lymphoid Aggregates

100x h&e stained- glands with squamous metaplasia & cartilage

100x h&e stained- glands with glial tissue

100x h&e stained- glands with dermal adnexae & fat

4. Discussion

The primary tumors likeliest to give origin to secondary deposits in the spleen are melanoma, carcinoma of lung, breast, ovary and choriocarcinoma, stomach skin and colon. [2]

Grossly evident secondary tumors are seen in the spleen in 4%to8% of necropsies in cases of cancer. The spleen is rare site of secondary tumors. The spleen is not a fertile ground for establishment and growth of tumor deposits. The suggestion that anti-tumor factors may be produced in the spleen found theoretical support in the growing knowledge of the role of immune mechanisms in certain types of cancer. However, no concrete evidence is yet produced that demonstrably supports.

Splenic reactions in cases of disseminated cancer:

It has been a matter of practical interest to pathologists and others to consider the possibilities that the spleen may be the site of the demonstrable changes in the course of the growth and dissemination of the cancers in other parts of the body. Morphological changes have been described in other lymphoid tissues, particularly in lymph nodes, as an accompaniment of the growth of carcinomas either in their drainage region or elsewhere. Modern techniques allow subtler cytological changes to be monitored and the results of such studies of the spleen and other lymphoid organs may clarify some of the still un-answered problems of the body's responses to the development and spread of cancers. In patients with cancer spleen often shows hypoplasia of both t cell and b cells, germinal centers, however in few patients. [3] solitary metastasis may present with splenomegaly and may be treated with splenectomy. Rare cases of splenic rupture have also been reported due to metastatic tumors.[4]

In one autopsy series, 1/3 rd of patients with splenic metastasis had no gross evidence of tumor. When grossly seen, the majority of tumors formed large nodules with areas of necrosis. Any tumor may secondarily involve the spleen on rare occasions.[5] generally splenic metastasis means late dissemination of a disease. It occurs rarely with a few case reports of patients in the literature. Solitary splenic metastasis from solid tumors is extremely unusual. [6]

Immature teratoma of the ovary is an uncommon tumor, comprising <1%of the teratomas of the ovary. It is seen most frequently during the reproductive years and unknown after the menopause. The tumor is usually asymptomatic until it reaches a considerable size, grow rapidly and may manifest it as a pelvic or lower abdominal mass. The tumor is usually unilateral.

In the present case there was a previous history of immature teratoma of ovary, a secondary deposit from teratoma, and mature cystic teratoma of spleen (splenic metastasis) was made.immature teratoma of ovary is a primary tumor,treated with surgery and chemotherapy.mature teratoma of spleen(splenic metastasis)treated with splenectomy.

5. Conclusion

Metastatic tumors involving the spleen are also quite rare, usually discovered on autopsy. There may be a splenic factor inimical to the establishment and growth of tumor deposits. However no good evidence seems as yet to have been produced that demonstrably supports this thesis.

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