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Case Report

Pathology section

An Isolated Splenic Metastasis of Melanoma which Masqueraded as a Pancreatic Pseudocyst

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ABSTRACT

A 60-year old man presented with left hypochondrial pain. Magnetic resonance imaging showed a large cystic lesion in the left hypochondrium, in close relation to the tail of the pancreas and an infiltrating splenic parenchyma, which were suggestive of a pseudocyst. The lesion was excised and it was sent for a histopathological examination. The histopathological examination revealed secondary deposits from the melanoma and this was confirmed by a immunohistochemical analysis. We are reporting this interesting case of an isolated splenic metastasis of melanoma which masqueraded as a pancreatic pseudocyst on an imaging study.

Key Words: Splenic metastasis, Melanoma, Pancreatic pseudocyst

INTRODUCTION

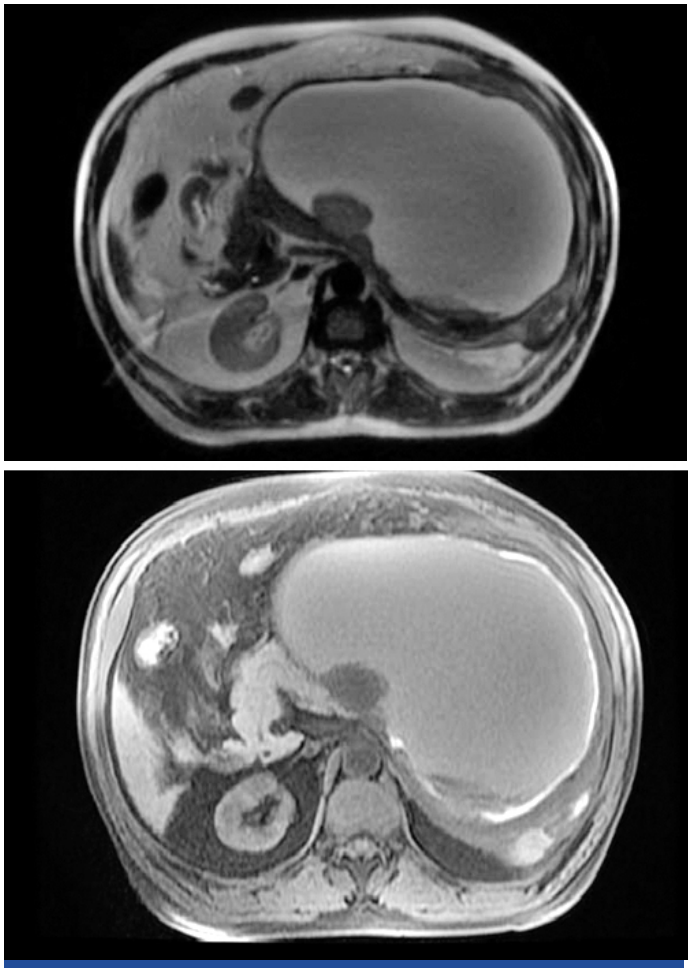
Metastasis to the spleen is considered as a rare event in the late course of malignant solid tumours. In life, they are commonly a part of a wide spread end stage disease and an isolated splenic metastasis is rare. Most of the splenic metastases are asymptomatic. The symptomatic cases account for only 8% of all the cases and they are seen commonly in women and in the younger age groups. The main metastatic pathway to the spleen is haematogenous [1].

CASE HISTORY

A 60-year old man presented with pain in the left hypochondrium and in the epigastrium. He had a history of amputation of the right lateral three toes for melanoma three years back and he had received inadequate chemotherapy. An ultrasound examination of the abdomen suggested a pancreatic pseudocyst. MRI of the abdomen showed a 19x17x18 cm hyperintense, cystic lesion in the left hypochondrium in close relation to the tail of the pancreas and an infiltrating splenic parenchyma, which were suggestive of a pancreatic pseudocyst [Table/Fig-1]. The cyst fluid amylase level was within normal limits. The patient underwent splenectomy and pancreatic pseudocyst excision.

Gross appearance: We received a dark brown, splenic mass which was 19x13x10 cm in size. The cut section showed a cyst of 14 cm diameter, which exhibited shaggy, dark brown walls with adherent organizing blood clots and compressed surrounding splenic parenchyma [Table/Fig-2].

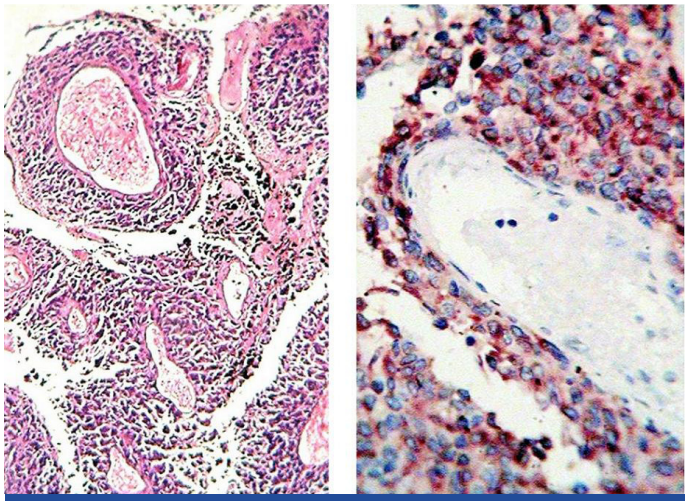
Microscopic examination: Multiple sections from the cyst wall which were studied, showed organizing blood clots, dense, hyalinized fibrous connective tissue and a dark brown pigment. Entrapped in the blood clots, malignant epithelial tumour cells were seen, which were arranged in a pseudo papillary configuration around the blood vessels. The cells showed nuclear pleomorphism, abundant eosinophilic cytoplasm and prominent eosinophilic nucleoli (a dark brown pigment was noted in the occasional cells). The pigment in the tumour was lost with bleaching, thus indicating its nature as melanin. The tumour cells



[Table/Fig-1]: MRI abdomen showing a hyper intense cystic lesion in left hypochondrium in close relation to the tail of pancreas infiltrating splenic parenchyma

showed a positive immunohistochemical staining for HMB-45 [Table/Fig-3 and 4]. The rest of the spleen showed the evidence of a chronic congestion with Gamma - Gandy bodies. No pancreatic tissue was identified in the multiple sections which were studied. Based on the above findings, a diagnosis of secondary deposits from a malignant melanoma was made.

[Table/Fig-2]: Cut section of spleen showing large cyst exhibiting shaggy dark brown walls with surrounded compressed splenic tissue.



[Table/Fig-3 & 4]: X10 H&E Malignant epithelial tumor cells arranged in pseudo papillary configuration around blood vessels.

DISCUSSION

The spleen is an infrequent site for metastases, though it is a vascular organ of the body [2]. The incidence of splenic metastasis varies from 2.3 to 7.1% [3]. The explanations that were proposed were:

1) The sharp angle which is made by the splenic artery makes it difficult for the tumour emboli to enter the spleen.
2) The rhythmic contractile nature of the spleen squeezes out the tumour or the embolus and prevents its lodging in the spleen.
3) The absence of afferent lymphatics to the spleen, the phagocytic activity of the splenic cells and humoral anti-cancer substances in the spleen are considered to be other reasons for the low incidence of splenic metastasis [3-4].

An isolated splenic metastasis is rarely reported. A recent review found only 93 reported cases of isolated splenic metastases [5].

The more commonly reported primary tumours which develop splenic metastases are breast, lung and colorectal carcinomas, ovarian and gastric carcinomas and skin cancers. Skin cancers account for only 5% of all such tumours [6]. The involvement of the spleen was observed in 30% of the melanoma patients at autopsy [6]. The time between the diagnosis of the primary lesion and the appearance of the metastases is very long [7]. Klaase et al., in 1990, found an average time of three years between the diagnosis of the melanoma and the development of the metastases, which was in accordance with our findings [8].

The splenic metastases are more often incidentally detected by ultrasonography and computerized tomography (CT) scanning during the regular follow up of the patients with cancer or in the work up which is performed at the time of any event which is related to cancer. The splenic metastases are symptomatic in only 08% of the patients [2] and they can also be revealed by fatigue, weight loss, fever, abdominal pain, splenomegaly, anaemia or thrombocytopaenia due to hypersplenism and more rarely by splenic rupture [5].

In the present case, the patient presented with the symptom of acute abdominal pain, which masqueraded as a pancreatic pseudocyst radiologically. Histopathology revealed secondary deposits of malignant melanoma. A careful search did not reveal any other site of metastasis. Thus, this is a case of an isolated splenic metastasis of a malignant melanoma of the skin that was excised three years back.

CONCLUSION

The spleen is an infrequent site for tumour metastasis. It is often asymptomatic and it is detected as a part of multi organ metastases. The symptomatic cases, though they are rare, do occur as in our patient. The splenic metastasis should be considered as a differential diagnosis in cystic lesions of the spleen and in pancreatic pseudocysts. A thorough clinical history and a histopathological documentation is a must in making a final diagnosis in these cases.

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