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A RARE INCIDENCE OF PANCREATIC SCHWANNOMA

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ABSTRACT

Schwannomas are benign, encapsulated, slow-growing tumors of Schwann cells. Pancreatic schwannomas are exceptionally rare. We present a case where a 64-year-old male presented with acute encephalopathy from illicit drug use and CT revealed a mass at the pancreatic head. The patient was reportedly told previously that it was unresectable fibrosarcoma. However, biopsy and immunostaining determined the mass as schwannoma. Due to the mass encasing nearby vessels, the patient was not a surgical candidate and was discharged for outpatient monitoring. This case represents an extremely rare entity of pancreatic schwannoma.

INTRODUCTION

- Schwannomas are benign, encapsulated, slow-growing tumors that originate from Schwann cells that form the myelin sheath for peripheral nerve fibers.
- About 90% of schwannomas are sporadic, while the remaining 10% is associated with genetic disorders.
- Majority of schwannomas occur in the head, neck, and distal extremities.
- Schwannomas in the abdominal cavity are rare and are most frequently found in the pancreas when they do occur.
- Pancreatic schwannomas are still exceptionally rare, with less than 70 reported cases in the literature in the past 30 years.
- Patients can present with non-specific symptoms or remain asymptomatic. CT scan commonly shows encapsulated, heterogeneous, and hypodense lesions.

CASE PRESENTATION

- A 64-year-old male with a history of chronic hepatitis C infection presented with acute encephalopathy due to amphetamine use which resolved with supportive care.
- The patient also stated that he had a history of intra-abdominal mass that was reportedly fibrosarcoma. He completed chemotherapy in 1991 and was previously told that the cancer was unresectable. The patient did not receive further treatment afterwards.
- CT imaging of abdomen and pelvis during the current hospitalization revealed a 6.5x6.8x9.3 cm mass along the head of pancreas with peripheral calcifications. Hepatosplenomegaly was present but there was no radiographic finding of cirrhosis.
- Bilateral lymphadenopathy of inguinal, iliac, and retroperitoneal lymph nodes were also noted, with the largest measuring at 1.8cm on right inguinal lymph node.
- EUS revealed a large heterogeneous and hypoechoic mass with septations and calcifications in the pancreatic head. Biopsy of the mass demonstrated numerous aggregates of spindle-shaped cells without tumor cell necrosis or mitotic figures. Neural differentiation was observed. There was no evidence of mitosis. Biopsy of the right inguinal lymph node was unremarkable for neoplasm.
- Immunohistochemical stains were remarkable for S100 and SOX-10, which were suggestive of peripheral nerve sheath tumor. Pankeratin staining was weakly positive. Other immunostains such as smooth muscle actin, CD117, CD34, desmin, DOG-1 (Discovered on GIST-1), HMB-45 (Human Melanoma Black-45), and Melan A were negative which excluded other neoplastic origins such as sarcoma, gastrointestinal stromal tumor (GIST), and melanoma. The pancreatic head mass was diagnosed as pancreatic schwannoma.
- Due to the schwannoma encasing superior mesenteric artery and vein, patient was deemed to not be a surgical candidate. Patient was discharged with regular outpatient monitoring.

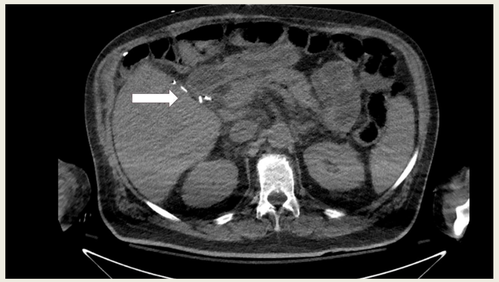

Figure 1: CT imaging of the abdominal cavity revealed a 6.5x6.8x9.3 cm mass at the pancreatic head with calcifications along the inferior margin of the mass (white arrow).

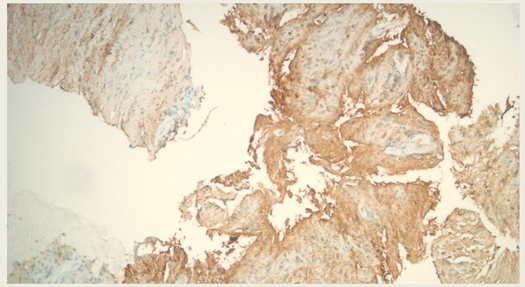

Figure 2: Biopsy of the pancreatic head revealed aggregates of spindle-shaped cells that stained positive for S100.

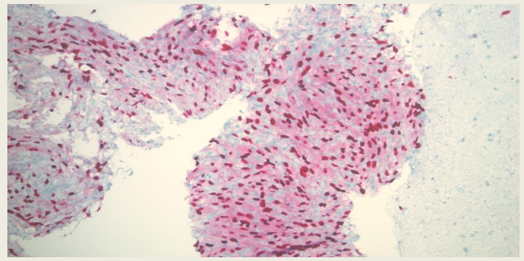

Figure 3: Biopsy of the pancreatic head revealed aggregates of spindle-shaped cells that stained positive for SOX10.

DISCUSSION AND CONCLUSION

- While pancreatic schwannomas are benign, there is an increased risk of malignant transformation when associated with von Recklinghausen's disease. Nonetheless, Lack of mitosis in our patient's biopsy further supports the benign nature of the tumor.
- Biopsy is required for diagnosis; immunostaining with S100 is confirmatory.
- If the specimen is positive for S100 but is negative for CD34, DOG-1, and HMB-45, it is known as pancreatic schwannoma with ancient features.
- Conservative management is recommended; symptomatic patients may benefit from resection of the mass.