

Spindle Cell Neoplasms of Pancreas

Primary sarcomas of pancreas are rare and represent <0.1% of all primary pancreatic neoplasms.¹ They usually present as high-grade tumours with large sizes in the head of pancreas and are more common in females.² Herein, we present a case of a middle-aged male with spindle cell neoplasm (SCN) of the pancreas.

A 50-year male initially presented to an internist with occasional epigastric pain. Blood investigations were within normal range but the ultrasound of upper abdomen revealed a lobulated lesion arising from the head of the pancreas. Furthermore, CT scan showed heterogeneously enhancing lesion in the mesentery root. It had a central area of necrosis arising from the uncinate process of pancreas measuring 94 x 99 x 82 mm in anterior-posterior (AP), transverse (TR), and craniocaudal (CC) dimensions. The lesion was surrounded by fat stranding, which was abutting the third part of the duodenum, infiltrating and encasing the superior mesenteric artery and superior mesenteric vein with complete thrombosis. The patient underwent endoscopic ultrasound (EUS) and fine needle aspiration biopsy (FNAB). The histopathology was consistent with SCN, leiomyosarcoma grade II. Immunohistochemistry showed positive desmin, smooth muscle actin (SMA) and caldesmon, focal positive, p16, diffuse positive, and CD 34 patchy positive, whereas MDM2, CAM 5.2, Cytokeratin AE1/AE 3, CD117, DOG1, and S-100 were all negative. Mib-1 (Ki-67) index was high. Subsequently, a PET CT scan revealed large hyper-metabolic mass with central necrosis at the root of mesentery with few non-FDG-avid subcentimeter perilesional lymph nodes with no metastatic disease. It was planned to proceed with surgical removal of the primary tumour.

SCNs are uncommon pathology on EUS-guided FNAB samples. In a study, the diagnosis of SCN in pancreas, upper GI tract, and hepatobiliary system was made in 1.7% of EUS-guided FNAB samples.³ This result was consistent with a previous study that reported SCNs in 2% of EUS-guided FNAB specimens.⁴ Bean *et al.* reported that up to 81% of cases have a specific diagnosis of spindle cell made on EUS-guided FNAB when the material is adequate for ancillary studies.⁴

Surgical pathology is considered as the gold standard for diagnosis of neoplastic lesions. FNAB material suggesting diagnosis of SCN of the pancreas, hepatobiliary, and upper GI tract has a high positive predictive value of neoplasm at the time of resection (93%, 43/46).³

Surgical resection remains the mainstay of the treatment.⁵ In a review of 27 cases, 43% of SCN lesions invaded other organs. The preferred treatment is total resection with wide margins. Despite the completion of the surgery, postoperative recurrence was 78.2%, and mortality rate was 59.3%. Therefore, early diagnosis and sequential radical surgery would improve the prognosis.⁶

In conclusion, SCNs of the pancreas are extremely rare lesions. Immunohistochemistry is indispensable for making a specific diagnosis. Due to the scarcity of literature, the information regarding pathological characteristics and the benefits of treatment options is limited.

COMPETING INTEREST:

The author declared no conflict of interest.

AUTHOR'S CONTRIBUTION:

Conceived the idea, searched the literature, drafted the manuscript, and approved the final version of the manuscript to be published.

REFERENCES

1. Nagaraju S, Grethlein SJ, Vaishnav S, Sharfuddin AA, Powelson JA, Fridell JA. Case Report: Primary *de novo* sarcoma in transplant pancreas allograft. *Transplant Proc* 2017; **49**(10):2352-4. doi: 10.1016/j.transproceed.2017.10.007.
2. Luc G, Collet D, Reich S, Stanislas S, Sa-Cunha A. Primary monophasic synovial sarcoma of the pancreas. *J Visc Surg* 2013; **150**(2):159-61. doi: 10.1016/j.jvisc.2013.01.006.
3. McHugh KE, Odrion SI, Smith A, Springer B, Aramouni G, Chute DJ, *et al.* Spindle cell neoplasms of the upper gastrointestinal tract, hepatobiliary tract, and pancreas by fine needle aspiration: A single institutional experience of 15 years with follow-up data. *Diagn Cytopathol* 2021; **49**(9):987-96. doi: 10.1002/dc.24801.
4. Bean SM, Baker A, Eloubeidi M, Eltoum I, Jhala N, Crowe R, *et al.* Endoscopic ultrasound-guided fine-needle aspiration of intrathoracic and intra-abdominal spindle cell and mesenchymal lesions. *Cancer Cytopathol* 2011; **119**(1): 37-48. doi: 10.1002/cncy.20120.
5. Ali RM, Seerwan K, Ali SM, Abdullah AM, Hawrami O, Hussein DM, *et al.* Primary pancreatic synovial sarcoma: Report of a rare case and review of the literature. *Med Int (Lond)* 2023; **3**(3):22. doi: 10.3892/mi.2023.82.
6. Sakaguchi K, Kuroda Y, Sugo H, Watanobe I, Machida M, Kojima K, *et al.* [Spindle cell type anaplastic carcinoma of the pancreas: Review of 27 Japanese case reports]. *Nihon Shokakibyo Gakkai Zasshi* 2020; **117**(5):430-6. doi: 10.11405/nisshoshi.117.430.

Asif Husain Osmani

Department of Oncology, Dr. Ziauddin Hospital and Ziauddin University, Karachi, Pakistan

Correspondence to: Dr. Asif Husain Osmani, Department of Oncology, Dr. Ziauddin Hospital and Ziauddin University, Karachi, Pakistan
E-mail: osmaniasif77@gmail.com

Received: August 29, 2023; Revised: November 11, 2023;
Accepted: December 06, 2023
DOI: <https://doi.org/10.29271/jcpsp.2024.08.1005>

•••••