

Metastatic Small Cell Carcinoma of Lung To Pancreas Mimicking As Acute Pancreatitis: A Case Report

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ABSTRACT

Small cell carcinoma (SCC) of lung is a highly malignant tumour and is notorious for early and widespread metastasis at the time of presentation. However, metastasis to pancreas occurs uncommonly. Metastatic lesions comprise of 3% of all pancreatic malignancies. We hereby present a rare case report where patient presented with symptoms of acute pancreatitis & diagnosed with SCC of lung, retrospectively. This case emphasize that acute pancreatitis can be a manifestation of malignancy and fine needle aspiration cytology can play a diagnostic role in such cases.

Keywords: FNAC, Metastasis, Neuroendocrine tumour

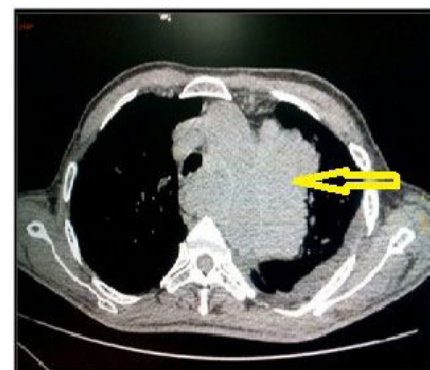
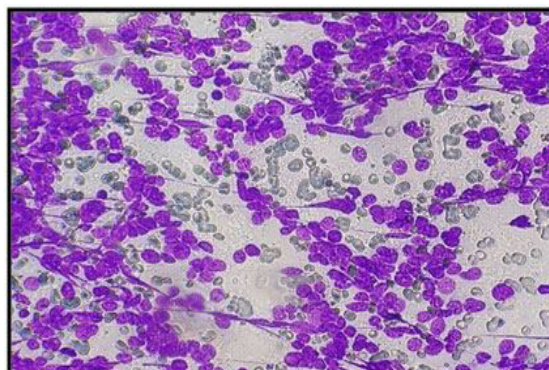
CASE REPORT

A 60-year-old man, presented to Medicine outpatient department of Medical College Kota, with severe epigastric pain with radiation to back. He was on Anti tubercular therapy (ATT) for pulmonary tuberculosis diagnosed at peripheral health care. His Laboratory analysis showed Serum lipase level at 2200 U/L (reference range: 23 to 300 U/L) and serum amylase at 300 U/L (reference range: 30 to 110 U/L) with normal liver function tests. He was diagnosed with acute pancreatitis. Computed Tomography (CT) abdomen demonstrated two hypodense lesions measuring 2 cm × 1 cm in the head and 1.2 × 1.2 cm in the tail of pancreas [Table/Fig-1]. An ultrasound (USG) guided Fine Needle Aspiration (FNA) was done which revealed small, round tumour cells with extensive nuclear molding, coarsely stippled chromatin, inconspicuous nucleoli and scanty cytoplasm. There were numerous mitosis and apoptotic bodies with background showing necrosis. The cytodiagnosis was small cell carcinoma (SCC) [Table/Fig-2]. More than one lesion on imaging, absence of peripancreatic or celiac trunk lymphadenopathy and cytodiagnosis of SCC favoured the secondary pancreatic involvement rather than primary. On further examination, CT scan of Left lung showed a central mass [Table/Fig-3], FNAC of which revealed SCC of lung [Table/Fig-4]. For confirmation a tru-cut biopsy was done. The biopsy showed round to oval tumour cells with scanty cytoplasm and stippled chromatin [Table/Fig-5]. There were areas of necrosis and brisk mitotic activity (>10/10 High power fields). Thus biopsy proved SCC from the lung.

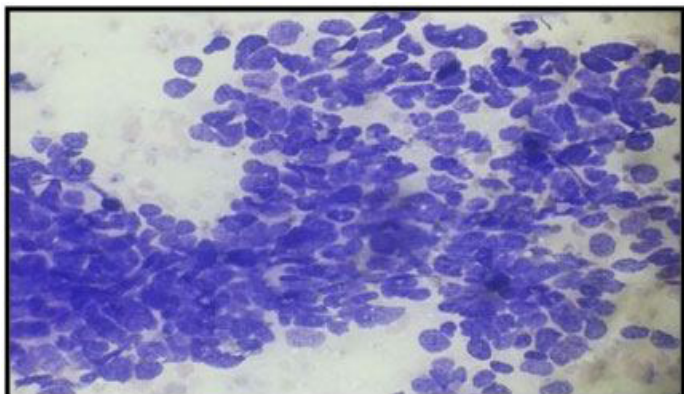
DISCUSSION

Metastatic tumours of the pancreas are rarely found clinically, although their incidence has been reported to be approximately 3% among malignant disease autopsies [1]. SCC are even more rarer [2]. Only 1% of all primary pancreatic neoplasms are small-cell carcinomas and 4% of all SCC have an extrapulmonary origin [3]. Tumours which are commonly seen to metastasize are from kidney, breast, and colon. Occasionally been described are melanoma, chondrosarcoma, sarcoma, and endometrial cancer [4]. Mesa et al., reviewed all secondary tumours of pancreas in literature between 1966 and 2003. Lungs (18.7%), gastrointestinal tract (17.7%), kidneys (16.3%), breasts (10.6%), and lymphomas (7.9%) were the most frequent secondary neoplasms in 699 cases [5]. In 1973, Levine and Danovitch first described a patient with small cell lung cancer in whom acute pancreatitis developed during the progression of the malignancy [6]. Our case was retrospectively diagnosed to be having SCC of lung when he presented with acute pancreatitis. Yeung et al., proposed that the pancreatitis, in association with small cell lung cancer, may result from ductal obstruction following direct invasion or peripancreatic compression due to metastatic enlargement of regional lymph nodes [7].

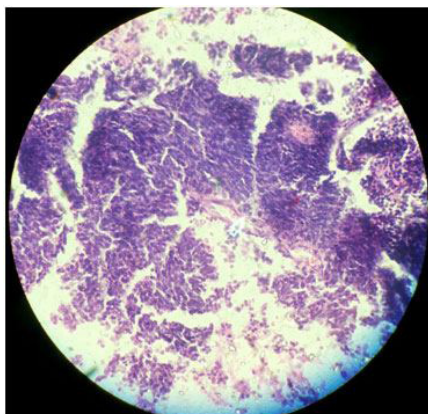
Our case revealed smears of very high cellularity with extreme nuclear molding and streaking by clusters of small tumour cells which is considered to be the most characteristic presentation of SCC. Cells had scanty basophilic cytoplasm. Arora et al., has done a study on 76 patients of SCC lung where he concluded that



[Table/Fig-1]: CT Scan Abdomen showing two space occupying lesions in swollen pancreas **[Table/Fig-2]:** Cytosmear from pancreatic mass showing nuclear molding, streaking & scanty cytoplasm (Giemsa Stain, 400X) **[Table/Fig-3]:** CT scan chest showing a parahilar mass involving left upper lobe (shown with yellow arrow)



[Table/Fig-4]: Hypercellular cytosmear from lung mass showing similar picture as pancreatic mass (Giemsa Stain, 400X)



[Table/Fig-5]: Tissue section from lung (H&E Stain, 100X) showing small cell carcinoma having dark staining cells with small, oval to spindled nuclei and scanty cytoplasm

nuclear molding, cell size and scant, basophilic cytoplasm were highly sensitive and specific for distinguishing SCC from Non-SCC [8] which was present in our case. Thus, ultrasound guided FNA

helped in arriving at a definite diagnosis as clinical suspicion was acute pancreatitis due to anti-tubercular drugs.

CONCLUSION

Although very rare, but small cell carcinoma of lung may present with metastasis to pancreas. So, one should always rule out the possibility of metastatic involvement, while dealing with space occupying lesions in pancreas, with the help of FNA cytology. Also, it should be remembered that acute pancreatitis can be a manifestation of metastasis in lung cancer. By early diagnosis of metastasis induced pancreatitis an immediate institution of palliative care can be done if not suitable for an aggressive surgical intervention.

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