Cytomorphology of Solid Pseudopapillary Tumor of Pancreas : A Lesser Known Entity.

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INTRODUCTION:

Solid pseudopapillary tumor (SPT) is a rare pancreatic neoplasm accounting for 0.17 – 2.7% of all nonendocrine tumors of the pancreas. It mostly occurs in adolescent girls and young women with mean age being 25-35 years. It mostly occurs in the body and tail of pancreas. Most SPT's are benign or have low grade malignant potential and prognosis after surgical excision is excellent.[1]

Here we present a case of a 24 year old woman with complaint of pain in left upper abdomen for 15 days with a palpable mass.

CASE REPORT:

A 24 year old woman presented with complaint of pain in left upper abdomen for 15 days. She also had history of loss of appetite for 10 days. There is no significant past or family history. Per abdomen examination revealed a deep seated palpable mass in left hypochondrium. Ultrasonography abdomen revealed a well circumscribed oval mass in left hypochondrium measuring 8.3 x 6.4 x 6.2 cm. Small cystic areas were also seen in the mass. CT whole abdomen revealed a heterogenous enhancing soft tissue density mass lesion seen in body of pancreas measuring approx. 72 x 67 mm. Mass lesion appeared to be infiltrating posterior wall of stomach and causing superior and posterior displacement of splenic vessels. CT whole abdomen described the possibility of Carcinoma body of pancreas.

USG guided Fine needle aspiration was performed from the pancreatic mass. Cytosmears examined were hemorrhagic with rich cellularity. It showed numerous scattered and few clusters of cells. Clusters at places were forming papillary configuration and at places were arranged in a ring pattern. Some of the clusters showed cells attached to a delicate metachromatic fibrovascular stalk. The individual cells showed plasmacytoid appearance and were more or less uniform in size and shape with eccentrically placed vesicular nucleus with small nucleoli. Many cells show intranuclear grooves and cytoplasmic vacuolation. The background showed few scattered histiocytes and occasional giant cells. Looking at the cytomorphological appearance, young female patient and imaging studies showing a sizeable mass with small cystic areas a diagnosis of solid cystic papillary neoplasm or SPT of the pancreas was made.

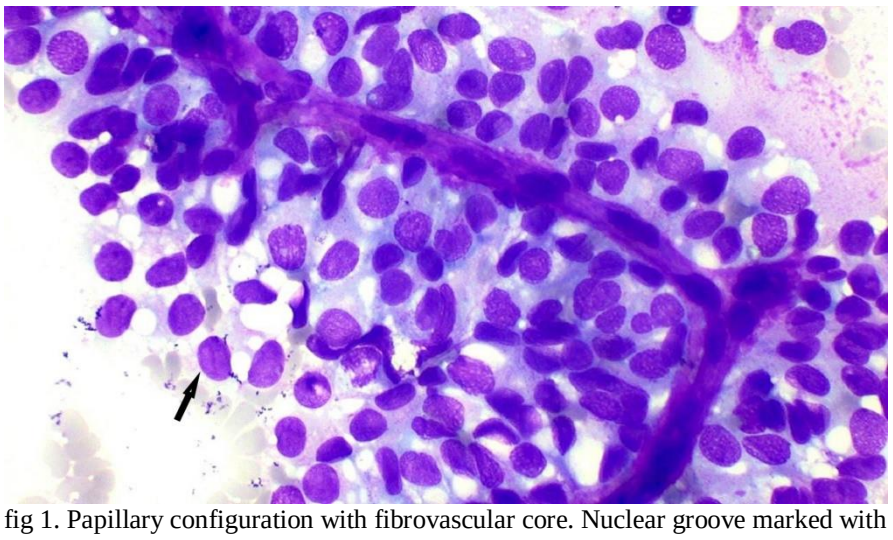

fig 1. Papillary configuration with fibrovascular core. Nuclear groove marked with arrow.

DISCUSSION :

Solid pseudopapillary tumor of the pancreas was first described by Frantz in 1959.[2] It has previously been ascribed many pseudonyms such as 'solid and cystic tumor', 'solid and papillary tumor', 'papillary cystic tumor' and 'solid cystic and papillary epithelial neoplam'.[3] It is a rare tumor of the pancreas and is predominantly found in adolescent girls and young women. It is infrequent in pediatric population, men and older women. The growing incidence of SPT is due to increased detection of the tumor.[4]

Being a pancreatic tumor they might not always be palpable and are characterized by long asymptomatic course and non-specific symptoms.[4] Our patient presented with chief complaint of pain in abdomen with a deeply palpable mass. The cytological features of this tumor are highly characteristic and an accurate preoperative diagnosis is helpful in early surgical management of the patient.[1]

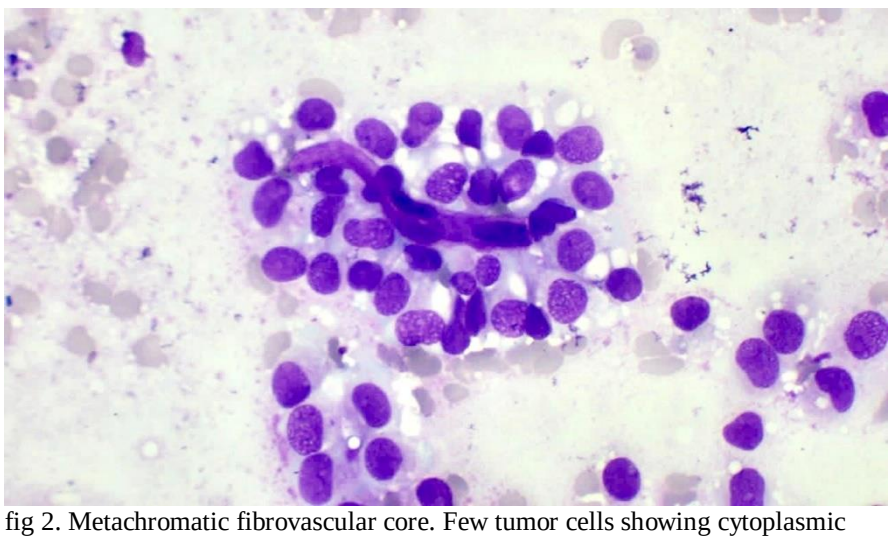

fig 2. Metachromatic fibrovascular core. Few tumor cells showing cytoplasmic vacuolation.

Cytomorpholgy shows papillary tissue fragments with slender branching fibrovascular stalks which are characteristic of this tumor. These tumor cells form two to several layers around this fibrovascular core.[3] The cells are usually monomorphic with round to oval eccentric nucleus. Nuclei show small nucleoli and occasional nuclear grooves are seen which is a typical finding of this tumor. Fine vacuolation may be seen and background may show hemorrhage, foam cells or necrosis.[4] The cytological findings in our case were similar to those as found in literature. Many discrete tumor cells and pseudorosette formations have also been described.[3]

Surgery is the mainstay of treatment with overall 5-year survival being >90%. Depending upon the location simple enucleation, distal pancreatectomy, pancreatoduodenectomy or Whipple operation is done.[4]

CONCLUSION:

Early cytomorphological recognition of this tumor is critical to extract these slow-growing, operable and potentially curable tumors of young women from the much larger pool of usual pancreatic cancers with their abysmal prognosis.

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