Mucinous Cystic Borderline Tumor of the Mesentery: A Case Report

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ABSTRACT

Mucinous cystic neoplasms are rare tumors of uncertain histogenesis. They arise from the ovaries, pancreas, and other intra-abdominal sites but more unusually from the mesentery. They can present with abdominal pain, distension, or a palpable mass but are commonly an incidental finding. We present a case of a 33 year old female who presented with complain of pain abdomen for one-year duration. On Physical examination there was a palpable lump in right lumbar region extending to right iliac fossa. CT scan of abdomen and pelvis suggested the mass to be a Mesenteric Cyst. Enucleation of the cyst was done and histopathology report revealed Mucinous Cystic borderline tumor of the Mesentery.

KEYWORDS

Borderline, cystic, mesentery, mucinous.

INTRODUCTION

Mucinous Cystic neoplasms (MCNs) can arise from the ovary and other extra ovarian sites including the pancreas, liver, kidneys, and appendix but rarely from the mesentery. These Mesenteric neoplasms are classified into benign cystadenomas, borderline tumors, and invasive carcinomas according to the presence of malignant features on histology.[1] There are very few reported cases of mucinous cystic neoplasms of the mesentery in the literature. Borderline mucinous cystadenoma belongs to the histological spectrum going from benign forms (mucinous cystadenoma) to malignant ones (mucinous cystadenocarcinoma).[2,4,5]

CASE-REPORT

A 33 Years old Female presented in our hospital with complain of Pain in right side of abdomen for one year. On Examination, There was a palpable intra-abdominal lump of about 10 X 5 cm in right lumbar region extending to right iliac fossa. The lump was mobile horizontally but was not mobile craniocaudally. CT Scan of the abdomen and pelvis showed 14.6 X 8.9 X 7.9 cm well defined, thin walled, predominantly cystic mass in right lumbar region and right iliac fossa (Fig. 1). Exploratory Laparotomy was done and finding was a Cystic mass of 10.5 X 6.5 X 2.0 cm size in the mesentery of right colon adhered to Caecum and Appendix (Fig. 2). Enucleation of the mass was performed. Histopathology revealed Mucinous Cystic borderline tumor of the Mesentery (Fig. 3).

DISCUSSION

There are only fourteen Muscinous Cystic Neoplasms (MCNs) of mesentery in the literature prior to this report.[3] Five of those originated from mesentery of small intestine, one from mesoaapendix, and seven from mesocolon.[3] They are commonly detected incidentally but can present with chronic abdominal pain, distension, or an abdominal mass. These tumors pose a diagnostic challenge due to their lack of specific symptoms, biochemical markers, and radiological features.[6]

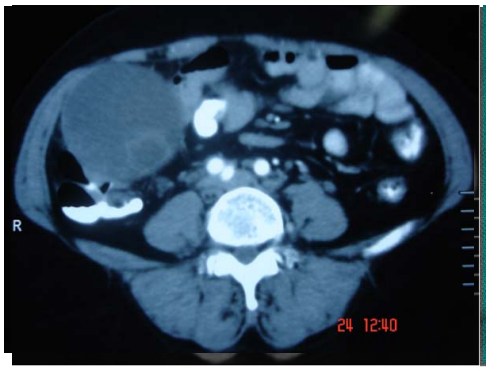

Figure 1. CT scan of abdomen showing cystic mass on Right side.

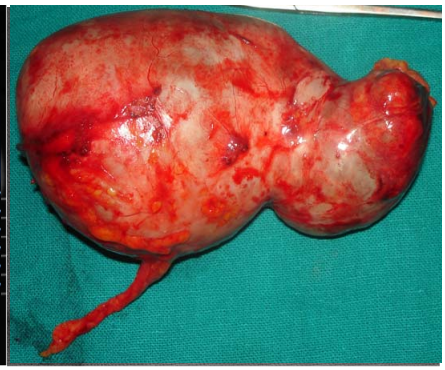

Figure 2. Excised cystic mass

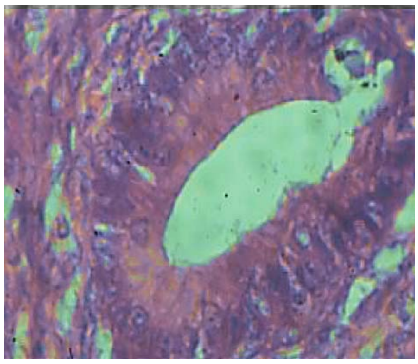

Figure 3. High power view of Nuclei with borderline features.

According to the WHO classification (ICD 10), MCNs are divided into benign adenomas, borderline tumors, non-invasive (in situ) and invasive carcinomas. The malignant potential of all MCNs is supported by observations of malignant transformation of benign neoplasms during long term follow up.[7,8]

The origin of extra-ovarian MCNs has been sporadically attributed to implanted or ectopic ovarian tissue, supernumerary ovaries or mono-phyletic development of a teratoma component. A recent concept linked the development of hepatic and pancreatic MCNs to the migration of epithelial cells from the embryonic gonads during early fetal life. The most widely accepted theories for the pathogenesis of extra-ovarian MCNs include: Coelomic metaplasia of epithelial cells or invaginated peritoneum along the course of ovarian descent, mucinous metaplasia in pre-existing mesothelial cysts and neoplastic differentiation of epithelial cells from a secondary extragenital Mullerian system.[3]

MCNs are histologically similar to ovarian mucinous cystadenomas. The cyst is composed of an outer wall of ovarian-like stroma consisting of spindle-shaped cells and myofibroblastic proliferation and an inner layer of mucin secreting columnar and cuboidal cells. The identification of ovarian like stroma on histological examination is diagnostic of mucinous cystadenomas, however, its absence does not preclude the diagnosis. Cysts of borderline malignancy display nuclear atypia and increased mitotic activity.[6]

The management of this tumor includes complete enucleation with a long term follow up, especially when borderline foci are found, to prevent relapses or malignant degeneration.[9] Excision can be by open or laparoscopic surgery, the latter being favored by a recent review of mesenteric cysts.[10]

CONCLUSION

Mucinous cystic neoplasm of the Mesentery is rare. It should be considered as differential diagnosis for any cystic lesion in mesentery. They can be classified as benign cystadenomas, borderline tumors, and malignant carcinomas. Complete excision and full histological examination of a mucinous cystic neoplasm can exclude a borderline or malignant component. Because of its potential for transformation into malignant, long term follow up is necessary.

REFERENCES

1. Kiki Mistry, Marta Penna, Shiva Dindyal, Hasan Mukhtar. A Mucinous Cystic Neoplasm of the Mesocolon Showing Features of Malignancy. Case Reports in Surgery Volume 2012;Article ID 727105.
2. Gutsu E, Mishin I, Gagauz I. Primary retroperitoneal mucinous cystadenoma: A case report and brief review of the literature. *Zentralbl Chir* 2003;128:691-3.
3. G. Metaxas, A. Tangalos, P. Pappa, I. Papageorgiou. Mucinous cystic neoplasms of the mesentery: a case report and review of the literature. *World Journal of Surgical Oncology* 2009;7:47.
4. Cotrill HM, Roberts WS. Primary retroperitoneal mucinous borderline tumor. *Gynecologic oncology* 2007;106(3):626-7.
5. Pearl ML, Valea F, Chumas J, Chalas E. Primary retroperitoneal mucinous cystadenocarcinoma of low malignant potential: a case report and literature review. *Gynecol Oncol* 1996;61:150-2.
6. JJ Luo, FK Baksh, JD Pfeifer, JT Eastman, FC Beyer, LP Dehner. Abdominal mucinous cystic neoplasm in a male child. *Pediatric and Developmental Pathology* 2008;11:46-9.
7. Kloppel G, Solcia E, Longnecker DS, et al. Histological typing of tumors of the exocrine pancreas. 2nd ed. Berlin: Springer; 1996.
8. Bury TF, Pricolo VE: Malignant transformation of benign mesenteric cyst. *Am J Gastroenterol* 1994;89(11):2085-7.
9. A Benkirane, A Mikou, A Jahid, F Zouaidia, L Laraqui, Z Bernoussi et al. Primary retroperitoneal mucinous cystadenoma with borderline malignancy in a male patient: a case report. *Cases Journal* 2009; 2: 9098.
10. JJY Tan, KK Tan, SP Chew. Mesenteric cysts: an institution experience over 14 years and review of literature. *World Journal of Surgery.* 2009;33:1961-5.