

Letter to Editor

Extensive cystic degeneration of leiomyoma mimicking ovarian cystic neoplasm

Mohammad ARAFA and Basem EL-ESAWY

Department of Pathology, Faculty of Medicine, Mansoura University, Egypt

Dear Editor,

We have received a case of pelvic leiomyoma with extensive cystic degeneration simulating, on gross inspection, an ovarian cystic mucinous neoplasm. A left paraovarian mass, without connection to the uterus or the ovary, was excised from a 45-year-old lady. The mass was 15cm in largest diameter, had a smooth outer surface and firm to soft consistency. On dissection, the mass was a multilocular cyst with thin walls and thick viscid yellowish contents (Fig. 1a). Solid whitish areas, some with haemorrhagic tinge, were present within the mass. Careful inspection of the some solid areas showed whorled appearance (Fig. 1b). Microscopical examination revealed a typical leiomyoma in the solid parts (Fig. 1c,d). The cystic component was the degenerated parts of the leiomyoma. This resulted in amorphous material that fills spaces delineated by thin strands of the tumour cells (Fig. 1e). The smooth muscle nature of the lesion was proven by diffuse cytoplasmic immunoreactivity to smooth muscle actin (SMA) (Dako, Glostrup, Denmark) (Fig.1f).

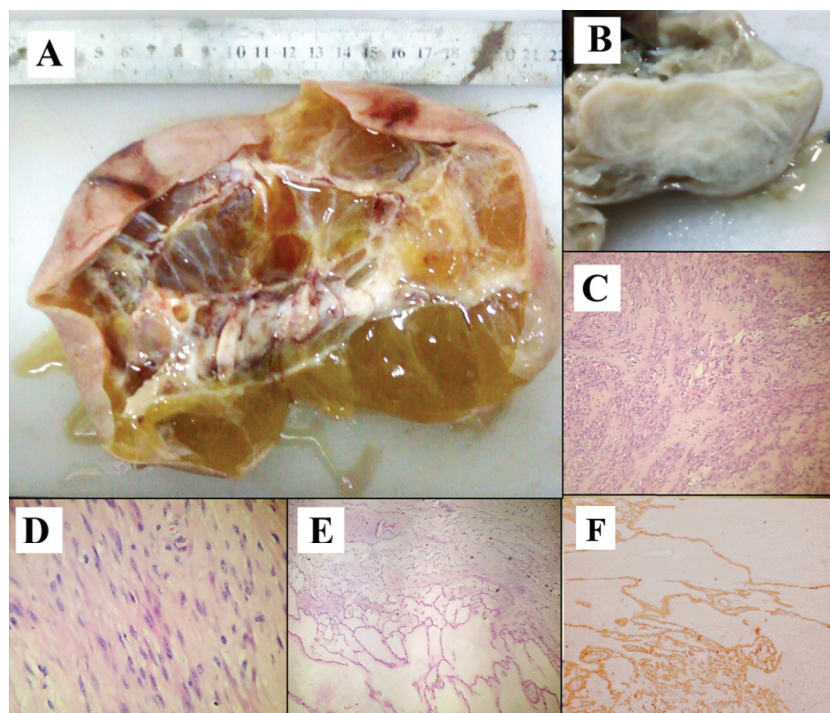


FIG. 1: (A) The bisected specimen with a predominantly multilocular cystic mass filled with thick yellowish material. (B) Focal whorly appearance of the solid areas. (C) Bundles and fascicles of spindle shaped cells in a stroma showing hyaline change (H&E x40). (D) Blunt ended nuclei of tumour cells (H&E x100). (E) Areas of cystic degeneration delineated by the tumour cells (H&E x40). (F) Cytoplasmic immunoreactivity to SMA within the tumour cells (DAB peroxidase x40)

The paraovarian location of the mass might be explained by an original pedunculated serous uterine leiomyoma that became ultimately separable.^{1,2} Many degenerative changes do occur in leiomyoma such as hyaline, cystic, myxoid, red degeneration and dystrophic calcification.^{3,4} These changes are thought to be the result of relative ischaemia affecting regions of the neoplasm.⁴ Cystic change in leiomyomas, which is a common phenomenon, might be a consequence of liquefied hyaline changes. However, extensive cystic degeneration in the majority of the lesion, as seen in the current case, has been rarely observed.^{3,4} Radiological and gross resemblance to other unrelated, benign or malignant, neoplasms may be deceiving. Similarities to serous or mucinous cystic neoplasms were previously reported⁴.

We herein report an extensive cystic degeneration in a leiomyoma simulating, on gross inspection, an ovarian cystic mucinous neoplasm. In this is extremely uncommon phenomenon, the solid areas should be carefully inspected and adequately sampled. Therefore, leiomyomas must be considered in the differential diagnosis of intra-abdominal masses in all female patients.

REFERENCES

1. Hendrickson MR, Tavassoli FA, Kempson RL, McCluggage WG, Haller U, Kubik-Huch RA. Mesenchymal tumours and related lesions. In: Tavassoli FA, Deville P, editors. Pathology and genetics of tumours of the breast and female genital organs. Lyon: IARC Press; 2003. p. 233-44.
2. Dancz CE, Macdonald HR. Massive cystic degeneration of a pedunculated leiomyoma. *Fertil Steril.* 2008; 90(4): 1180-1.
3. Kaushik C, Prasad A, Singh Y, Baruah B. Case series: cystic degeneration in uterine leiomyomas. *Indian J Radiol Imaging.* 2008; 18(1): 69-72.
4. Low SC, Chong CL. A case of cystic leiomyoma mimicking an ovarian malignancy. *Ann Acad Med Singapore.* 2004; 33(3): 371-4.