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CASE REPORT

Endocervical - Like Mucinous Borderline Tumour of the Ovary : Case Report with the Clinical and Histopathological Study

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ABSTRACT

Clinical and histopathological features of an ovarian endocervical - like mucinous borderline tumour (EMBT) are studied. A 31 - year - old women had a right cystic ovarian tumour with a portion of papillary proliferation at the inner wall. Peripheral blood carbohydrate antigen 125 (CA125) level was 44 U/ml, carcino-embryonic antigen (CEA) was 1.4 ng/ml, which were within a normal range. Carbohydrate antigen 19-9 (CA19-9) was 390 U/ml, an abnormally high level. A right adnexectomy was performed. Histopathological examinations showed that the tumour was an ovarian endocervical - like mucinous borderline tumour. The histopathological features of EMBT are papillary proliferation and the epithelium resembling endocervical cells. Additionally, immunohistochemical staining showed that the specimens were positive for CA19-9 and negative for CA125 and CEA. She is alive and well 2 years and 10 months after the operation.

Key words : ovarian mucinous tumour, endocervical type, borderline malignancy, CA 19-9, immunohistochemistry

Recently, ovarian mucinous tumours of borderline malignancy are subclassified in three categories : (1) endocervical type, (2) intestinal type, (3) mixed type. One of them, ovarian endocervical - like mucinous borderline tumours (EMBTs) have been initially termed mullerian mucinous papillary cystadenomas of borderline malignancy by Rutgers and Scully.[1] EMBTs account for approximately 15% of ovarian mucinous borderline tumours (MBTs). There are still a few literatures on EMBTs.[1-3] We report clinical and histopathological features of a case of EMBT.

Case Report

A 31 - year - old housewife, para 2, complaining of lower abdominal pain since the beginning of January, 1991. She did not have remarkable family and past history. After gynaecological and ultrasound examinations she was suspected to have an ovarian tumour, and referred to our hospital on February 14, 1991. Gynaecological and ultrasound examinations revealed a right cystic ovarian mass of 7.5 x 5.3 x 5.3 cm, and an excrescence was seen in a part of the inner wall. No abnormal findings were seen by haemogram, biochemical examinations of the blood, chest X-ray, ECG, and pyeloureterography. The tumour markers, CA 19-9 was 390 U/ml, which was abnormally high. CA 125 was 30 U/ml, and CEA was 1.4 ng/ml, both values were within normal ranges. She was diagnosed to have an ovarian tumour, and underwent a laparotomy. Right ovarian tumour was found, the uterus and left ovary were normal looking. Right adnexectomy was performed. The tumour was unilocular, inner wall was smooth except a portion of solid excrescence was observed. She is alive and still free of disease 2 years and 10 months after the operation.

Histopathological Findings

Haematoxylin-eosin (HE) stain of the sections of this tumour mostly revealed mucinous cystadenoma, and a portion of papillary structures was presented (Fig. 1, 2). The epithelium of the papilla mimicked that of the cervical glands (Fig. 3). The nuclei were on the basal side, stratification and atypicality of the nuclei were partly seen (Fig. 3, 4). Inflammatory cellular infiltration was seen in the stroma (Fig. 4). Periodic-acid-Schiff (PAS), alcian blue, and mucicarmine, Grimelius stainings and immunohistochemical stainings of CA 19-9, CA 125 and CEA were then performed. The specimens were positive for PAS, alcian blue and mucicarmine stainings, and negative for Grimelius. Additionally, immunohistochemical staining showed that the specimens were positive for CA19-9 and negative for CA125 and CEA.

Discussion

Ovarian EMBT of a 31-year-old female patient is presented. Unique feature of our case report is the tumour marker findings. Haematologically, CA125 and CEA values were normal and CA19-9 value was abnormally high. Additionally, immunohistochemical staining of this tumour sections showed positive for CA19-9 and negative for CA125 and CEA. Rutger and Bell found that EMBTs and mixed-epithelial MBTs were positive for CA19-9, on the contrary intestinal-type MBTs were positive for CEA.[3] We had reported that intestinal-type mucinous tumour tend to be positive for CEA immunohistochemically.[4] These tumour markers findings may be useful to distinguish the three types of MBTs.

Histogenesis of ovarian mucinous tumours was obscure and complex. Concerning the MBTs, endocervical type and mixed-epithelial type are regarded as of mullerian origin. But the histogenesis of intestinal type has not yet been established. It is interesting that MBTs of endocervical-type and mixed-epithelial type show positive for CA19-9 and intestinal type show positive for CEA. Histogenesis of mucinous tumours may be more understandable by studies of these tumour markers.

Ovarian mucinous tumours account for 15 to 25% of all ovarian tumours. Of all mucinous tumours, about 85% are benign, 6% borderline, and 9% invasive.[5] Recently MBTs are subclassifed in three categories (endocervical, intestinal, or mixed type).[6] EMBTs account for approxi-

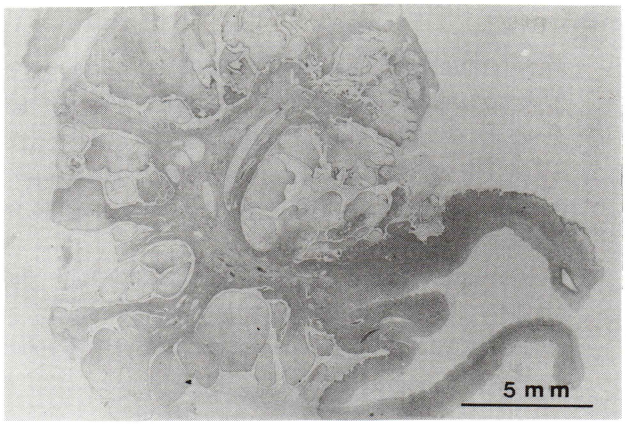

Fig. 1. Papillary projection in the inner wall of the tumour (5x).

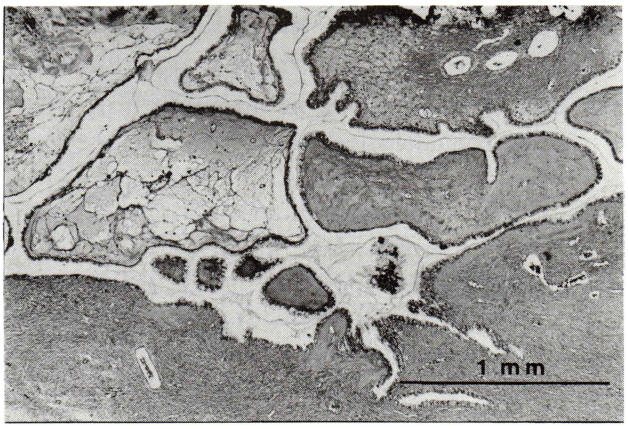

Fig. 2. Microscopic findings of the papilla (40x).

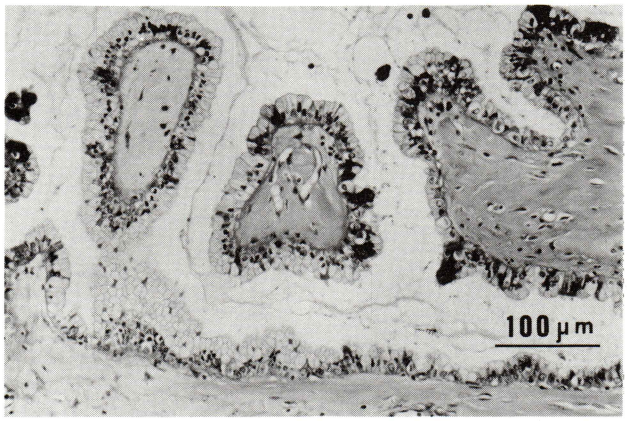

Fig. 3. The endocervical type epithelium is noted (200x).

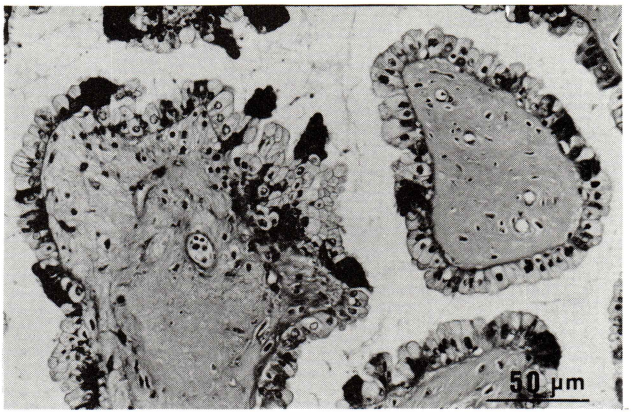

Fig. 4. Indifferent cells with eosinophilic cytoplasm showing stratification and tufting. Inflammatory - cells in the stroma are also noted (400x).

mately 15% of all MBTs.[2] Still, there are few literatures on EMBTs.[1-3] Clinically, ovarian EMBTs often affected young women (average age of 34), often occurred in the ovaries bilaterally, and consisted of unilocular cystic tumour with a solid tumour in a part of the inner wall.[1] Our case had these features, including ultrasound and macroscopic findings.

Ovarian serous borderline tumours have characteristic papillary proliferation, but it is rare to manifest as papillary proliferation as in MBTs. Histological features of EMBTs were papillary structure, the epithelium resembled that of the cervical glands, and no evidence of intestinal differentiation (goblet, argentaffin, or Paneth cells) was seen. Inflammatory cellular infiltration was seen in the stroma in every cases. EMBTs are characterized by the presence of endocervical type epithelium. Its histological diagnosis should be done precisely.

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