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NON-FUNCTIONING OVARIAN FIBROMA WITH EXTENSIVE CALCIFICATION: CASE REPORT

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A. U. MUKHTAR and G. M. WASSWA

SUMMARY

A case of a non-functioning ovarian fibroma with extensive calcification in a young Ugandan female is described. Ovarian fibromas occasionally may be bilateral and associated with benign ascites and pleural effusion called Meigs' syndrome or related to a rare hereditary condition known as Gorlin's syndrome. Rarely if functioning, the tumour may produce hormones to cause diabetes mellitus or hypoglycaemia or secrete carbohydrate antigen 125 to clinically simulate ovarian carcinoma.

INTRODUCTION

Fibromas of the ovary are rare benign tumours which constitute less than five per cent of all ovarian tumours(1-3). The origin of this tumour was not clearly understood in the past(4,5). Previously, it was thought to arise from non-specialised ovarian connective tissues, however, several studies supported that ovarian fibroma develops from specialised ovarian tissues(5). The tumour is now listed among the sex-cord stromal tumours of the ovary(5).

Chalvardjian and Scully(6) have further separated sclerosing stromal ovarian tumours from the thecoma-fibroma group. It is an acceptable notion that there is a morphological relationship between thecomas and fibromas, that most fibromas may be regarded as "burnt out" thecomas(4,5). Fibromas of the ovary may occur as non-functioning or functioning tumour associated with endocrine abnormalities.

We report a case of a non-functioning ovarian fibroma with extensive calcification in a young Ugandan female.

CASE REPORT

A twenty-year old secondary school girl was referred to the Obstetrics and Gynaecology clinic of Mbarara University Teaching Hospital with a six-month history of progressive abdominal swelling; she had been expelled from school due to an alleged pregnancy. However, pregnancy test was negative. She was moderately built, there was no ascites, pleural effusion or oedema of the legs. The rest of the physical examinations were normal. Physical and ultrasound examination suggested an ovarian tumour. Laparotomy was undertaken and a right ovarian tumour with an adherent right fallopian tube on the tumour were removed. The removed right fallopian tube on both gross and histological examination was unremarkable. The left ovary was normal in size and left fallopian tube in situ and looked normal at surgery. The uterus was nulliparous and of normal size. Biopsies were not taken from the uterus, left ovary and left fallopian tube because they had a normal gross appearance at surgery. There was no ascites and no clinical evidence of pleural effusion. Her recovery was uneventful and she was readmitted back into her school.

Figure 1

Ovarian fibroma with nodular surfaces and prominent blood vessels on the capsule



Figure 2

Cut surface of the fibroma with focal areas of cystic degeneration (arrows)



Figure 3

Ovarian fibroma with focal areas of calcification (arrows)



On pathological examination, the tumour measured 20 x 15 x 10cm, firm, nodular with prominent blood vessels on the surface of the tumour. Cut surfaces showed a solid tumour with cystic areas and extensive calcifications. Histological examination revealed a benign spindle cell tumour arranged in interlacing bundles. The cells were regular and mitotic figures were absent. Focal areas of cystic degeneration and extensive calcifications were also present (Figure 3).

DISCUSSION

Ovarian fibromas can be unilateral or bilateral and can occasionally be associated with benign ascites and pleural effusion called Meigs' syndrome(7). The tumour may produce carbohydrate antigen 125 to clinically simulate ovarian carcinoma. Laparotomy and pathological examination is sometimes mandatory for the final diagnosis of this neoplasm. Ovarian fibromas have also been linked to a hereditary disorder known as Gorlin's syndrome(8-10). The syndrome is inherited as an autosomal dominant disorder with variable penetrance characterised by multicentric basal cell carcinoma of the skin, keratocysts of the jaw, strabismus, pits of the palms and soles, dysgenesis of corpus callosum, spina bifida occulta, ectopic calcifications and cerebellar medulloblastomas. Female patients with Gorlin's syndrome are susceptible to develop ovarian fibromas; infact, the presence of the fibroma may be the first sign of the presence of the syndrome(8-10).

Ovarian fibromas can extensively calcify as seen in this case as compared to thecomas which rarely calcify(11). The calcification may be seen even on plain abdominal X-rays. The massive calcification seen in this case was evident both on gross and microscopic feature(11,12).

Some ovarian fibromas are said to be functional. Ghost *et al*(13) reported a case a fibroma - thecoma secreting oestrogen with insulin intolerance causing diabetes mellitus. Another patient was reported to have suffered recurrent attacks of hypoglycaemia that was permanently ameliorated by the removal of the tumour(14). A rare phenomenon of tumour to tumour metastasis have also been described in an elderly woman with breast cancer which metastasised to her ovarian fibroma(15).

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