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Case Report

KRUKENBERG TUMOUR SIMULATING UTERINE FIBROIDS AND PELVIC INFLAMMATORY DISEASE

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ABSTRACT
Objective: To report a case of cancer of the colon which presented as secondaries to the ovaries.
Method: Case report.

Summary: The case presented is that of a 39 year old female who presented with lower abdominal pain and a multinodular pelvic mass which led to an initial diagnosis of multiple uterine fibroids and pelvic inflammatory disease. The presence of a colonic mass was first suggested by ultrasound .Laparotomy revealed carcinoma of the colon with bilateral krukenberg's tumour and an insignificant fibroleiomyoma.

Conclusion: This case is reported to alert practitioners that all multinodular pelvic masses should not be assumed to be multiple fibroids.

Key Words: Colonic cancer, Krukenberg's tumour, uterine fibroids. *(Accepted 23 August 2009)*

INTRODUCTION

Uterine fibroids, constitute the commonest cause of pelvic tumours in women[1] being present in 25% of women of reproductive age[2].They are painless when uncomplicated. Dysmenorrhoea may however be an accompanying symptom when they are complicated by pelvic inflammatory disease. It is therefore very tempting to make a diagnosis of fibroids whenever a firm nodular pelvic mass is encountered. Conversely malignant ovarian tumours are relatively rare especially the secondary type which accounts for only 2.13% [3]of malignant ovarian tumours. In this paper we present a multinodular pelvic mass which was first diagnosed as multiple fibroids with chronic pelvic inflammatory disease but later turned out to be krukenberg's tumour to alert practitioners as to the possibility of this important differential diagnosis.

CASE REPORT

Mrs. N.I a 39 year old female, para 0+1 presented in the outpatients department of Imo State University Teaching Hospital on 24/4/07 with a history of colicky lower abdominal pain of three months duration. The pain often radiated to the waist and had persisted in spite of various therapies. Her periods were regular although she had experienced some suprapubic pain during menstruation lately.

Her only pregnancy in 2006 ended in a preterm delivery at seven months . The baby did not survive and a diagnosis of uterine fibroids was made post delivery.

On examination, she was a febrile, not pale, not jaundiced and had no peripheral lymphadenopathy or oedema. Her pulse was 74 /min, blood pressure was 120/90mm of mercury, and heart sounds were normal. Her chest was clinically clear .The abdomen was flat, with no organomegaly. Vaginal examination showed a firm uterus irregularly enlarged to the size of a ten week pregnancy. A clinical diagnosis of multiple uterine fibroids with chronic pelvic inflammatory disease was made. Investigations included PCV 29, WBC 2,700/dl, with normal differential count, platelets $206x10^3$, ESR 120mm/hr, Urinalysis was normal and no pathogens were grown on culture .The retro viral test was negative. Plain abdominal X-ray and intravenous pyelogram were normal .An initial ultrasound scan was reported thus:(1) Intestine: Thickened loop of intestine 25mm thickness and 61mm in diameter is seen below the liver and adjacent to the right kidney.(2)Liver, gallbladder ,pancreas, kidney and spleen normal.(3).Bulky anteverted uterus 132 x52 x38mm in longitudinal ,transverse and antero posterior diameters with a subserous fundal fibroid 48mm in diameter and normal endometrium.

(4).Bilateral solid ovarian masses, right110x90mm and Left 125x95mm.

(5). No fluid collection

A repeat scan on the 4th of May reported only huge multiple interstitial fibroids.

The patient was booked for exploratory laparotomy on the 16th of May and the findings were as follows:-2litres of ascitic fluid, diffuse peritoneal seedlings and omental metastases seen. There was a tubular mass 100mm in length involving the hepatic flexure of the colon. There were bilateral ovarian tumours, right 120x110mm and left 90x75mm. There was also a fundal fibroid 5x80mm. A diagnosis of cancer of the colon with secondaries to the ovaries and peritoneum was made.A right hemicolectomy with ileo transverse anastomosis, left partial ovariotomy , right ovariotomy ,and myomectomy were done .The blood loss was estimated at 250mls.The abdomen was closed in layers and a drain was inserted.

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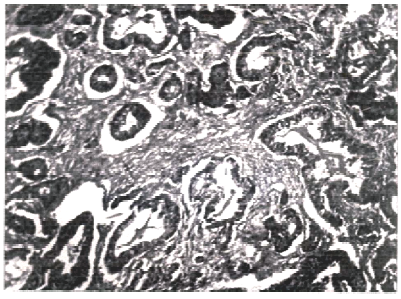
All specimens were sent for histology and reported thus:
GROSS. Right Ovary 9.5x9x3.5cm.Greyish white firm and nodular .Cut surface shows a greyish white brownish and dark surface with variable size cystic areas .Focal necrosis noted.
Left Ovary 8.5x6.5x3cm. same as the right ovary but for size.
Intestine: 43 cm, with proximal end about 17cm from the ileo caecal junction. The mesentry and entire segment including the appendix are matted with variable size enlarged grayish white nodules.A huge firm nodular grayish white colonic mass (ascending colon)is seen about 12cm from the ileo caecal junction. Its cut surface is grayish white.
MICROSCOPY: Fig 1
Sections of the intestinal tissue show a non-encapsulated mass invading the muscular layer. The mass in most areas is composed of variable sized ragged glands invading the muscle layer. Also seen are foci of infiltrating sheet and nest of loosely cohesive malignant epithelial cells. Some of the glands are swimming in a lake of mucin. This same tumour is seen invading the mesentery, vemiform appendix, ileum and adjacent caecum. The proximal and distal resection margins are spared. Both ovaries are seen to have been diffusely invaded by these malignant glands
A histological diagnosis of Mucinous adenocarcinoma of the colon with bilateral Krukenberg's tumours of the ovaries was made.
The post operative period was very stormy and was complicated by severe hypertension BP 200/110mm of mercury and pulmonary oedema which were successfully controlled with hydrallazine ,intravenous frusemide, aminiophyline and oxygen .The patient thereafter slowly recovered and was discharged on the 12th post-operative day. She was worked up for chemotherapy which was started on15/6/07 with Leucovorin and 5- fluorouracil. She developed malignant intestinal obstruction secondary to diffuse peritoneal metastases and bilateral pleural effusion , gradually went downhill and died on 6/8/07.



Right Krukenberg x100. Section show several irregularly shaped malignant glands invading the entire ovarian stroma.

DISCUSSION

Malignant ovarian tumours of the ovary may be primary or secondary .Secondary tumours are rare and when bilateral and mucinous are named Krukenberg tumours after Friedrich Krukenberg who described them in 1896 [4] . They constitute about 40% of Secondaries to the ovaries and originate from gastric carcinoma in 70-80% of cases [5]. Sites of primaries are the colon, kidney or the gall bladder. Their incidence varies with that of gastric cancer in the environment and is said to be about 2% of all ovarian malignancies.
The age of presentation of this patient is close to the mean age of presentation of 43.3years [6] and is also consistent with the fact that most (71.5%) cases present before menopause[6].The prognosis of these patients is that of the primary tumour most patients dying within a year of diagnosis as was the case here.
This case serves to alert practitioners to the fact that all nodular masses in the pelvis are not necessarily fibroids and all pains associated with menstruation are not always the result of pelvic inflammatory disease. Such symptoms may indeed as illustrated here be the result of more serious problems .Although this patient had fibroids it was relatively small and insignificant in comparison to the very large ovarian secondaries and was not responsible for the patient's symptoms.
It is possible that the premature labour the patient had was precipitated by the tumour while the blame was inadvertently heaped on the fibroids. This case also suggests that when premature labour occurs careful investigations should be done to try to elicit the cause of the premature labour. Had this been done the lesion may have been discovered when it was still amenable to treatment.
Also demonstrated in this case is the fact that ultrasound is highly observer dependent. Both scans failed to show the presence of ascitis while the second scan completely missed the colonic mass. This possibility of an error should always be borne in mind in the evaluation of imaging results of patients.

REFERENCES

1. **Theodoros A, Konstantinos D, Kalliopi P.** Cystic degenerated angioleimyoma mimicking ovarian pathology.Acta Obstet Gynaecol Scand.2001;80:863-865.
2. **Vollenhoven B.** The epidemiology of uterine leiomyoma.Bailliere's Clin Obstet Gynaecol;.1998;12(20):169-76
3. **Banjo AA.** Morphological patterns of tumours of the female genital tract: A histopathological survey of cases seen in LUTH (1985-1990).A dissertation submitted to National Postgraduate Medical College of Nigeria p20.
4. **Krukenberg FE.** Ueber das fibrosarcoma ovarii mucocellulare (carcinomatodes)Arch fur Gjnukol.Berlin,1896;50:287-321.
5. **Berk JS.**Novak's Gynaecology 13th Edition .New York. Lipincott Williams and Wilkins 2002;1302.
6. **McGill F, Ritter DB, Rickard CS, Kaleya RN, Scott W, Gresten WM, et al.** Management of Krukenberg tumours ;an 11 year experience and review of literature .Primary care update of Obstetrics and Gynaecology 1998.5 (40);157-158.