LEIOMYOMATOSIS PERITONEALIS DESSEMINATA AN INCIDENTAL FINDING DURING AN EMERGENCY CEASAREAN SECTION IN A PRIVATE HEALTH CARE FACILITY IN LAGOS, NIGERIA.

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ABSTRACT

Leiomyomatosis peritonealis disseminata is a rare benign smooth muscle tumor that clinically and macroscopically simulates disseminated intra-abdominal or pelvic malignancy. It occurs predominantly in women of child bearing age and mostly discovered incidentally. A 33 year old $G2P1^{+o}$ lady with previous myomectomy had an emergency ceasarean section for cephalopelvic disproportion (CPD) at term. Findings at surgery were consistent with disseminated intra-abdominal malignancy, however histology report showed leiomyomatosis peritonealis disseminata. Her follow-up radiologically for 6 month was uneventful.

Keywords: Leiomyomatosis Peritonealis Disseminata (LPD), Myomectomy, Ceasarean section, Cephalopelvic disproportion (CPD), Omentectomy, Havana Specialist Hospital,

INTRODUCTION

Leiomyomatosis peritonealis disseminata is a rare clinical condition that is characterized macroscopically by multiple small nodules on abdominal and pelvic peritoneum. It mimic disseminated intra-abdominal or pelvic malignancy, especially ovarian malignancy.[1,2,3]

It is often an incidental finding, during laparotomy or pelvic surgeries. Thus the incidence quoted in literature may be far lower than the actual incidence of the disease. It is common during the reproductive age or during the use of oral contraceptive pills.[4,5,6,7,8]

Prolonged exposure or high dose use of oestrogen has been suggested as the primary factor for it development. Extensive or radical surgeries are usually not necessary especially when the patient still desires pregnancy.

This paper report a quite rare case of Leiomyomatosis peritonealis disseminata in a young primiparous woman from the south western part of Nigeria.

CASE REPORT

She was a booked 33 year old $G2P1^{+o}$ lady, with 1, living child with previous myomectomy. She booked the pregnancy at 12 weeks gestation and had 10 uneventful antenatal care clinic visits. The routine antenatal heamatological and biochemical investigations were essentially normal. Obstetric ultrasound scan at 12, 22 and 36 weeks gestations were normal.

Her last pregnancy was in 2009, it was

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spontaneously achieved, term with vaginal delivery of a live female neonate. The baby weighted 3.4 kg with good APGAR score. The baby is alive and well.

She had myomectomy in a private Hospital in Lagos in 2006 for Uterine fibroids with menorrhagia. The post–operation period was uneventful. She menstruates for 4-5 days in a regular cycle of 26-29 days. She is not a known hypertensive or diabetic and no family history of abdominal, breast or gynaecological malignancy. She use emergency hormonal contraception occasionally and had used combined oral contraceptive pills for about 6 months before the index pregnancy.

She presented in active please labour and 2 hours history of drainage of liquor at 38 weeks gestation in the hospital emergency room. The progress of labour and foetal well being were closely monitored. However she developed clinical features of cephalopelvic disproportion (CPD) and had an emergency ceasarean section after counseling. Her pre-operative packed cell volume was 34%. Findings at surgery were dense vascular pelvic adhesions involving the bladder, the uterus and the guts. There were wide spread whitish nodules on the omentum, but no ascites. The liver, urinary bladder and the guts appeared normal grossly. There were small fibroid nodules (Largest 2cm x 1cm) on the uterus, but the tubes and the ovaries were grossly normal. She was delivered of a live male neonate that weighed 3.6kg in direct occipito-posterior position with APGAR scores of 9 and 10 in 1 and 5 minutes. The estimated blood loss was 500ml. Omenta tissues were taken from 3 sites and sent for histology.

She had a good recovery from the surgery with post operative packed cell volume of 32% on second post-operative day. She was discharged home on the 4th day of operation to be reviewed with the omental tissue histology report in 2 weeks. She was also counseled on the need to immunize her baby.

The histology report showed omental biopsy showing nodules composed of interlacing bundles of relative uniform smooth muscle within a collagenous stroma. Mitotic figures are infrequent and cellular atypia and pleomorphism are absent. The diagnosis of Leiomyomatosis peritonealis disseminata was made.

She was counseled on the need to comply strictly with follow up management, which she did till 6 month post-operatively. Monthly abdominal-pelvic ultrasound scan carried out were normal. She was also referred to the Oncology unit, Obstetrics and Gynecology department, Lagos University Teaching Hospital for Follow-up.

DISCUSSION

Leiomyomatosis peritonealis disseminata (LPD) is a rare, benign, smooth muscle tumor that clinically and macroscopically simulates disseminated intra-abdominal or pelvic malignancy. [1,2]. It was first reported in 1952, but identified histologically as a pathological entity in 1965.[7,8]. It occur predominantly in women of child bearing age, although few cases have been reported in post menopausal women. [3,4,5,6]

The incidence may be far higher than documented in the literature, because it is usually asymptomatic and findings are usually incidental, during surgical procedures such as Laparotomy, Ceasarean section, Laparoscopy or Postpartum tubal ligation.[6,9,10] Some cases may be detected incidentally during ultrasonography. [9] On rare occasions patients may presents with symptoms such as acute abdomen, lower abdominal pain, abdominal swelling, urinary frequency, pre-menstrual pain or peritonitis. In this report, it was an incidental finding during an emergency ceasarean section . She was asymptomatic with an uneventful antenatal care period. Most cases follow this pattern of presentation.

The aetiology of LPD is still unkown, but several

risk factors such as child bearing age utilization of combined oral contraceptive pills, long period of exposure to oestrogen, presence of uterine fibroids, granulosa cell tumour of the ovary, endometrial carcinoma or hormone therapy has been implicated.[1,4,11,12] Assisted reproductive technology is also a risk factor because of the high serum oestrogen concentration due to ovarian hyper stimulation. LPD is believed to be as a result of hormonal imbalance, since oestrogen and progesterone receptors were found within the cells of the lesion.[5] The mode of development of LPD has been proposed as the unusual sensitivity of the coelomic tissue undergoing plastic changes. This explain the possibility of it occurrence with endometriosis in the same patient.[5,13] The regression of LPD after delivery or discontinuation of combined oral contraceptive pills, bilateral oophorectomy, corroborated the involvement of these risk factors in the development of LPD. This patient had myomectomy 6 years prior to the detection of the disease and had used combined oral contraceptive pills for more than 6 months before the last pregnancy.

Radiological investigations such as abdomino-pelvic ultrasound scan, Computed Tomography (CT) scan and Magnetic Resonance imaging (MRI) are useful non-invasive radiological tools to make a diagnosis.[13] Although the results of these investigations may mimick wide spread intra-peritoneal malignancy. The definitive diagnosis of LPD is by histology of surgical specimen.[13] Interestingly, this patient had 3 obstetrics ultrasound scans at 12, 22 and 36 weeks gestations which did not show this pathology, possibly the sizes of the nodules of LPD may be too small for the resolution of the ultrasound scan.

Although most of the patients with Leiomyomata peritonealis disseminata are often subjected to radical surgeries such as salpingo-oophorectomy, Omentectomy, Myomectomy and debulking of abdominal and pelvic nodules, these procedures are often over treatment and their accompanied morbidities may worsened the patients clinical condition.[5,9]. Conservative management may just be adequate, especially when there are no clinical intraoperative findings suggestive of malignancy such as ascites, invasion of adjacent tissues or when facility for intra-operative frozen section is available.[5] The disease often regresses after the removal of the hormonal stimuli. However management should be individualized based on the patients clinical state, parity and age.

Other management modalities include the use of gonadotropin releasing hormone argonists, megestrol acetate, danazol and raloxifene, although response to these therapy is poor.[9] Aromatase inhibitor such as anastrozole has showed good results in controlling tumor growth and symptoms.

Leiomyomatosis peritonealis disseminata may regress spontaneously or may regress following radical resections such as total abdominal hysterectomy, bilateral oophorectomy, omentectomy, myomectomy, debulking nodules or it may re-occur or undergo malignant transformation in rare cases.

We decided to manage this patient conservatively, while awaiting histology report, when we consider the patients clinical state and intra-operation findings such as the absence of weight loss and ascites. The paracolic gutters and the ovaries were also grossly normal. She had 6 months of uneventful post-operation follow-up

CONCLUSION

Leiomyomatosis peritonealis disseminata is under and misdiagnosed, because of the asymptomatic presentation, radiological and intra-operative simulation of the features of disseminated abdomino-pelvic malignancies.

Thus it must be considered as a differential diagnosis in cases of multiple peritoneal nodules. Absence of ascites and intra-operative frozen sections carried out when available will reduce embarking on unnecessary radical surgeries, which may worsened patients clinical condition post-operatively.

REFERENCES

1) Bekkers RL, Willemsen WN, Schijf CP, Massuger LF, Bulten JM. Leiomyomatosis peritonealis disseminata: does malignant transformation occur? A literature review. Gynecol Oncol. 1999; 75 (1): 158-63

2) Kang SS, Jung HW, Chung JE, Chung KS. A case of Leiomyomatosis Peritonealis Disseminata. Korean J. Obstet Gynecol Jul; 42 (7): 1595-1598

3) Single G, Gordon-Harris, Frazer GB, Walker S O. Case Report: "Leiomyomatosis Peritonealis Disseminata" Online Journal of Health and Allied Sciences, 2010 Vol 9 (2): 12

4) Takeda T, Masuhara K, Kamiura S. Successful management of a Leiomyomatosis peritonealis Disseminata with an aromatase inhibitor. Obstet Gynecol. 2008; Aug; 112(2): 491-3

5) Atilio Baez-Gangreco, Mohammad A, El Sharkawy T, Al Harbi O, Haddad R. Leiomyomatosis Peritonealis Disseminata. Annals of Saudi Medicine, 2000: vol 20 (5-6):440-442

6) Gedda MAM, Piantavirha AG, Coutinho RT, Mendonca, Gustario de Vasconcelos B. Leiomyomatosis peritonealis Disseminata. A case report. Radiol Bras. 2008; 4(5):349-351

7) Wilso JR, Peale AR. Multiple Peritonealis Leiomyomas associated with a granulosa-cell tumor of the ovary. Am J. Obstet Gynecol. 1952;64:204-8

8) Taubert HD, Wissner SE, Haskins AL, Leiomyomatosis Peritonealis Disseminata an unusual complication of genital leiomyomata. Obstet Gynecol 1965; 25:61-74

9) Dim CC, Akogu SP, Ezegwui HU, Olusina DB. Leiomyomatosis Peritonealis Disseminata in a Nigeria woman. Niger Med J. 2012;53:172-4

10) Halama N, Grauling –Halama SA, Daboul I. Familial clustering of Leiomyomatosis peritonealis Disseminata:an unknown genetic syndrome?BMC Castroenterology. 2005;5:33.

11) AI-Talib A, Tulandi T. Pathophysiology and possible Iatrogenic cause of Leiomyomatosis Peritonealis Disseminata. Gynecol Obstet . Invest. 2010;69;239-49

12) Ezeome ER, Mannini F, Olusina BD. Progressive Leiomyomatoasis peritonealis Disseminata (LPD). A case report and review of literature. Trop. J Obstet Gynecol.2006;22:197-9.

13). Toriyama A, Ishida M, Amano T, Nakagawa T, Kakuis Iwai M, Yoshida K, Kagotani A, Takahashi K, MurakaniA, Okabe H. Leiomyomatosis peritonealis Disseminata coexisting with endometriosis within the same lesions: a case report with review of the literature. Int. J Clin Exp. Pathol. 2013 Nov.15;6(12):2949-54.