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Case Report

Leiomyomatosis Peritonealis Disseminata: Case Report

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ABSTRACT

Background: Leiomyomatosis peritonealis disseminata (LPD) is a rare benign smooth muscle lesion seen mostly in premenopausal women. Although benign, it can degenerate to peritoneal leiomyosrcoma. Pre-operative diagnosis may be challenging especially in the absence of advanced imaging techniques in low resource setting as clinical presentations may mimic peritoneal carcinomatosis and metastatic lesions. **Diagnosis:** The pre-operative diagnosis was recurrent uterine fibroid however the histological examination of the surgical specimen confirmed the diagnosis of Leiomyomatosis peritonealis disseminata consisting of benign smooth muscle cells. **Work up/surgery performed**: She had pelvic ultrasound scan done that showed bulky uterus with multiple uterine fibroids. She had laparatomy with abdominal myomectomy. Histopathological examination of the lesion post-surgery revealed LPD consisting of smooth muscle cells of uterine leiomyoma. **Conclusion:** LPD is a rare disease that may mimic intra-abdominal malignancies in clinical presentations.

Keywords: Case report; Leiomyomatosis peritonealis disseminata; previous abdominal myomectomy

INTRODUCTION

Leiomyomatosis peritonealis disseminata (LPD) is characterized by proliferation of peritoneal lesions primarily emanating from smooth muscle cells.[1] It is more common in premenopausal women. Most reported cases of LPD follow laparoscopic myomectomy. Literature search has shown rarity of LPD after open abdominal myomectomy. The actual incidence is unknown but more than 200 cases of LPD have been reported. Although generally benign, it may degenerate into peritoneal leiomyosarcoma. Diagnosing LPD preoperatively can be a challenge due to its resemblance of peritoneal carcinomatosis and metastatic lesions.[1] We presents a case of LPD as seen in Eagle Mountain Specialist Hospital Abuja, Nigeria.

CASE REPORT

A 50-year-old nulliparous woman admitted for repeat abdominal myomectomy for recurrent symptomatic uterine fibroids and umbilical hernia repair after the initial clinical evaluation. She was referred to our gynecological clinic with abdominal swelling and pain of 3 years duration. She has had two previous abdominal myomectomy 18 and 6 years ago for similar presentations. Clinical assessment revealed a 24-week size uterine mass and umbilical hernia. No other remarkable findings. Abdominal ultrasound showed bulky uterus with multiple uterine fibroids mainly intramural (largest measuring 7.1cm X 6.2 cm) and pedunculated (measuring 7.1cm X 6.2cm). The endometrial cavity was distorted by fibroid masses.
Abdominal CT and MRI could not be done due to financial constraints.

She was counselled on management options but she opted for myomectomy as she intends to go for in vitro fertilization thereafter due to background primary sub fertility. She was optimized preoperatively and scheduled for laparotomy. Abdominal myomectomy was subsequently performed with intra operative findings of uterus laden with fibroids in all layers including the Broad ligament, myriads of fibroid seedlings scattered all over the upper abdominal segment and the omentum as showed in figures 1 & 2 below.

Histopathological analysis of the excised tissue samples showed benign smooth muscle cells without atypical or mitotic figures with the conclusion of uterine Leiomyoma,

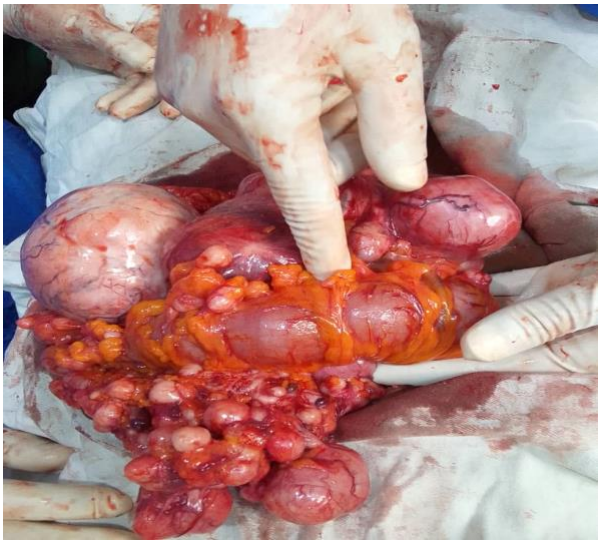

Figure 1: Intra-p finding of Fibroid Seedlings on the Omentum

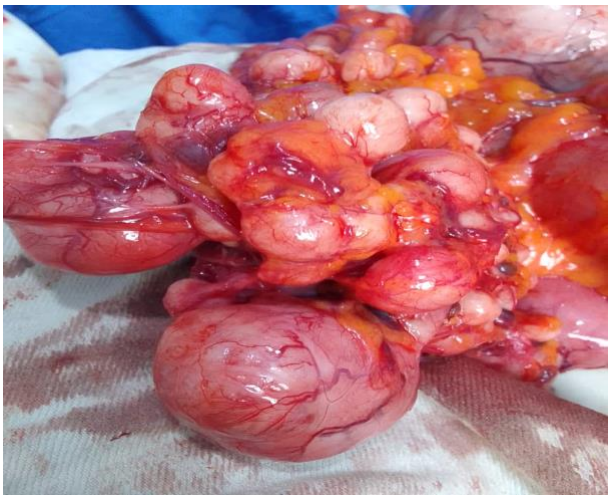

Figure 2: Surgical Specimen of Myoma Nodule

DISCUSSION

Leiomyoma is the most common benign tumour of the uterus in reproductive age women[2]. It is a monoclonal tumour of the smooth muscle cells[2]. Evidence from reported data showed that it is commoner in Blacks than in white women with a cumulative incidence of 80% and 70% respectively[3].

The aetiopathogenesis of uterine leiomyoma remain unclear, although there are associated risk factors. These include its dependence on Estrogen and Progesterone, age, race, obesity, hypertension, familial and environmental risk factors. [4]

Recently, disseminated viable leiomyoma particles in the abdominal cavity has been included as a rare late complication of abdominal myomectomy with an estimated incidence of 1.2%[5]. Wilson et al in early 1950s coined the Leiomyomatosis Peritonealis Disseminata (LPD) to describe rare benign lesion caused by uterine fibroid by tissues disseminated and implanted on the surface of greater momentum, mesentery and colorectum[6]. With over 150 cases reported worldwide, little is known about its aetiology. It is believed that residual leiomyoma in the abdominal cavity contribute to LPD in susceptible women[1]. Estrogen has been linked to metaplasia and differentiation of mesenchymal stem cells into smooth muscle cells fuelling the assumption that LPD arise from metaplasia of mesenchymal cells of the peritoneum[7].

Most reported cases occurred in premenopausal women as with the index case. Laparoscopic fibroid surgery with morcellation may be a predisposing factor as most reported cases followed previous laparoscopic myomectomy with morcellation[8]. This is supported by the hypothesis of Emery et al that during myomectomy with power morcellation, leiomyoma cells could disseminate and adhere to inflammatory zones of the

abdominal cavity.[9] This contrast with the index patient who has had 2 previous open abdominal myomectomy highlighting another angle to the etiopathogenesis of LPD which is previous myomectomy irrespective of type of surgical approach.

It has been observed that the mean time lag between surgery and development of LPD especially following surgery with morcellation is 5.4years[10]. This could not be ascertained in this report as patient was not followed up after the last surgery before her current presentation.

Preoperative diagnosis of LPD is still a challenge as reported by earlier workers. Index patient was not an exception as abdominal swelling and pain were the only symptoms presented otherwise healthy with 2 previous myomectomies.

There is no treatment guideline on this rare tumour and at most is case dependent. Spontaneous regression of this disseminated lesion has not been reported [11]. This leaves surgery as the treatment of choice, the surgical scope depends on the patient's age, Symptomatology, fertility wishes and previous treatment[11].

Our study reported only one case but something is striking as one may need to inform our patient that repeat myomectomy Carries additional risk of LPD, although a more elaborate study is needed to draw such conclusion.

CONCLUSION

LPD is an emerging rare clinical entity. The major risk factor identifiable is history of uterine fibroid surgery. We have reported a case following 2 previous fibroid surgeries. This calls for greater caution on the part of the surgeon during operation.

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Ethical Approval: The patient gave an informed written consent to the publication and accompanying images.

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