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## Parasitic leiomyoma: A case report with literature review



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## ABSTRACT

**INTRODUCTION:** Parasitic leiomyoma is an extremely rare variant of uterine leiomyoma occurring outside uterus. The aim of this study is to report a case of parasitic leiomyoma with brief literature report.

**CASE REPORT:** A 46-year-old lady presented with upper abdominal heaviness and swelling of about 6 year duration. associated with nausea, shortness of breath and palpitation. There was large well defined, mobile, hard mass in epigastric area measuring about 12 × 10 cm. Abdominal ultrasound showed well defined, solid, 94 × 76 mm, mass in the epigastric region. Abdominal computed tomography scan showed round homogenous opacity at the epigastric region with features consistent with benign lesion. Laparotomy was done, histopathological examination confirmed the diagnosis of parasitic leiomyoma.

**CONCLUSION:** Parasitic leiomyoma is an extremely rare subtype of uterine leiomyoma, presents with vague symptoms, diagnosed by ultrasound and managed by complete resection. Previous uterine procedures have been implicated in its etiology.

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## 1. Introduction

Uterine leiomyoma (UL) is the most common tumor affecting woman genital tract [1]. By the age of 35 years, at least 20% of female gender develops UL. When it occurs in its usual site, presentation, diagnosis and management are straightforward. While when it exists in unusual area, the diagnosis becomes challenging for both the treating physician and the histopathologist [2]. Although extremely rare, any anatomical site might be involved. The etiology is unknown, however iatrogenic cause is suggested [2]. Several authors reported PL occurring after laparoscopic removal of UL or uterine myomectomy and explained the condition by unintentional seeding of the fragments during the procedure [3–5]. However PL occurring in virgin abdomen cannot be explained by this etiology. PL is an extremely rare disease with less than 30 reported cases in literature [1–20]. In line with SCARE guide line, we report a rare case of PL occurring a in a middle age female without history of previous abdominal operation with a brief review of literature [21].

## 1.1. Patient information

A 46-year-old, married, house wife presented with upper abdominal heaviness and swelling of about 6 year duration. It was increased in size and making her unwell and disturbed during last few months, became worse during exercise associated with nausea, shortness of breath and palpitation. Family, drug, and past medical and surgical history were negative.

## 1.2. Clinical findings

There was large well defined, mobile, hard mass in epigastric area measuring about 12 × 10 centimeters. Overlying skin was normal. Vital signs were normal.

## 1.3. Diagnostic assessment

Chest x-ray, electrocardiography and complete blood count were normal. Abdominal ultrasound showed well defined, solid, 94 × 76 mm, mass in the epigastric region, just inferior to pancreas without invasion to surrounding structures. Oesophageogastrodenostomy was normal. Sample taken by fine needle aspiration was insufficient for diagnosis. Abdominal computed tomography scan showed round homogenous opacity at the epigastric region with features consistent with benign lesion (Fig. 1).

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Fig. 1. Round homogenous, smooth outline opacity at the epigastric region.

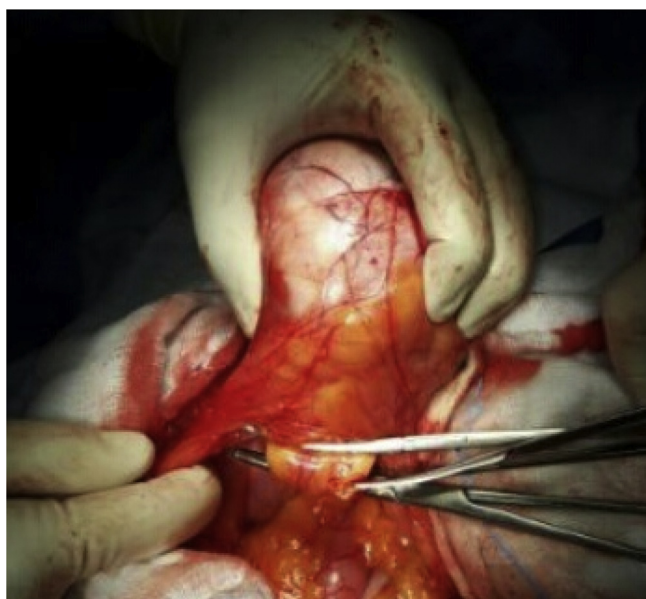


Fig. 2. Intraoperative finding of the lesion.

1.4. Therapeutic intervention

Under general anaesthesia, in supine position, midline upper laparotomy was done, there was large, well defined, regular, round mass on greater omentum which was completely excised (Fig. 2). The procedure was performed by the first author who has 15 year experience in general surgery with his team composing of second and fourth authors.

1.5. Follow-up and outcomes

Histopathological examination confirmed the diagnosis PL (Fig. 3). Three month later, the patient was found to be well with free of symptoms. The scar was healthy.

2. Discussion

UL is a benign tumor, composes of uterine smooth muscles [17]. The true prevalence and incidence of this disease are difficult to

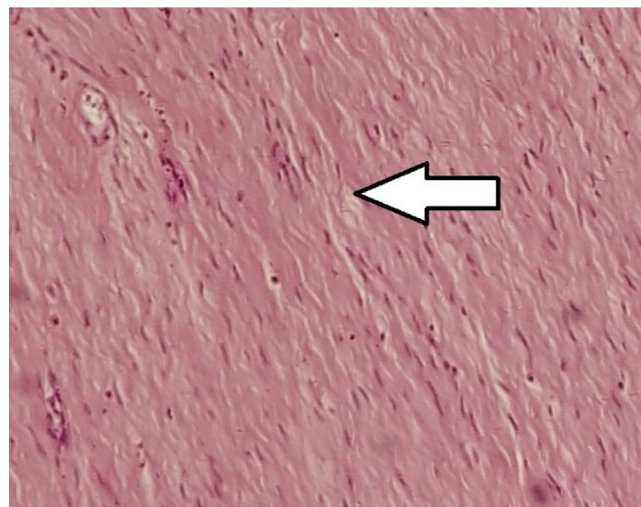


Fig. 3. whorled (fascicular) pattern of smooth muscle bundle separated by well vascularized connective tissue (white arrow). Power magnification ×100.

be determined as several cases go undetected because of being asymptomatic. African American ladies are reported to be affected more than Caucasian female [15]. According to FIGO classification, UL has been classified into four main types: subserosal, ransmural, intramural and submucous fibroids [15]. PL is regarded as a sub-type of subserosal fibroid by some authors [2,22]. Others regards it as a complication of uterine procedures being performed for any type of uterine pathology [2,15]. Literatures have only few reported cases of PL, most of them reported in last few decades secondary to increased laparoscopic procedures of the uterus [15]. Kimberly and his colleagues reported 12 cases of PL. Ten of the 12 patients had history of abdominal procedures and eight had history of previous morcellation procedures [18]. Lu et al. presented six case of PL all of them had history of laparoscopic hysterectomy or myomectomy with power morcellation [4]. Gaspare and associates conducted a retrospective study to show the development of PL after the application of a morcellator over three years in a tertiary hospital. Out of 423 ladie, in whom morcellation was done, 0.9% developed PL. the authors concluded that morcellation is risk factor for developing PL. Therefore, a careful inspection and thorough washing of abdominal and pelvic cavities should be done after thr procedure [19]. The current case report of PL occurred in a 46 year old female without history of prior abdominal procedures. Although this occurrence is extremely rare but few cases have been reported by others [1]. Zaitoon reported a PL in a 40 year old female with morbid obesity without previous abdominal or pelvic operation [1]. Abdel-Gadir et al. reported a 35 year old female presented with PL apart from secondary infertility, she has not past medical or surgical history [6]. Schaudien and his colleagues reported a 70 × 28 × 35 centimeters in size and 41 kg in weight PL in a 16-year-old Hanoverian male [22].

Majority (93%) of PL occur in pelvis [15]. Gamandi et al. reported a 32-year-old black female with PL occurring in right para-rectal area displacing the right adnexa, appendix and cecum anteromedially [10]. Pezzuto and associates reported two patients with bowel PLs [20]. In the current case, the mass was found on greater omentum which is consistent with case report by Dashraath et al. [8]. PL is usually asymptomatic [11]. The most common symptom-present is pressure symptoms which include early satiety, bloating during eating, abdominal discomfort and nausea [8–10].

Concomitant occurrence of UL with PL has been reported. Allairi et al. reported a 29-year-old female presented with adnexal mass, on evaluation, she appeared to have multiple intrauterine leiomyomas [7]. Nappi et al. at laparotomy of a 58 year-old woman found

a small subserosal UL displaced by a large right intraligamentary PL [13]. We did find any other lesion apart from omental PL. diagnosis is usually suggested by typical ultrasonological features (whorled appearance). The echogenicity depends on the presence of calcification, fibrosis, and degeneration [15].

The management is usually resection which can be performed by open, laparoscopic or robotic procedure [12,14]. Menders and his colleagues were succeeded in robotic resection of a 3 × 3 cm PL involving obturator fossa through obturator foramen [14].

In conclusion, PL is an extremely rare subtype of UL, presents with vague symptoms, diagnosed by ultrasound and managed by complete resection. Previous uterine procedures have been implicated in its etiology.

### 2.1. Patient perspective

The patient was anxious before the intervention, post operatively she was happy and satisfied about the outcome.

### Conflicts of interest

There is no conflict to be declared.

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No source to be stated.

### Ethical approval

Approval has been taken from bioscience centre.

### Consent

Written consent has been taken from the patient for publication of this report.

### Author contribution

Abdulwahid M. Salih: Surgeon performed the operation and follow up. Final approval of the manuscript.

F. H. Kakamad: writing the manuscript, reviewing the literature and follow up with final approval of the manuscript.

Dahat A.H., Imad J. Habibullah, Goran M. Rauf: literature review and final approval of the manuscript.

### Guarantor

Fahmi Hussein kakamad.

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