



ANTERIOR ABDOMINAL WALL LEIOMYOMA - A RARE SURGICAL CONUNDRUM

¹Dr. Snehasis Smrutiranjana Das*, ²Dr. Vikyath Shetty HP, ³Dr. Mari raj M,
⁴Dr. Gopal Balasubramanian[#]

¹Junior Resident, Department of General Surgery, JIPMER

²Junior Resident, Department of General Surgery, JIPMER

³Senior Resident, Department of General Surgery, JIPMER

⁴Additional Professor, Department of General surgery, JIPMER

*Primary Author, #Corresponding Author

ABSTRACT

The most frequent benign tumour of the female reproductive system is leiomyoma. Although found primarily in the uterus, it can also be found in unusual sites such as the ovary and broad ligament. In extremely rare circumstances, the anterior abdominal wall can form a nidus for these lesions. Females who have previously undergone laparoscopic uterine procedures are more likely to develop them. Given the rarity, they often provide diagnostic difficulties for operating surgeons and are frequently misdiagnosed as intra-abdominal cancer. We discuss the case of a 47-year-old woman who experienced cyclical abdominal pain and was diagnosed with an anterior abdominal wall leiomyoma, which was removed laparoscopically in its entirety, resulting in complete symptomatic resolution.

KEYWORDS: - leiomyoma, rectus abdominis, myomectomy, parasitic fibroids

INTRODUCTION

In reproductive-age females, leiomyomas are one of the most frequently found tumors in the genital tract. They are seen in almost 20% of the females in the reproductive age [1]. They are most often found in the uterus but less commonly can be seen in broad ligament, ovary, and very rarely in atypical places like the anterior abdominal wall. It is postulated that such atypical fibroids usually arise from the uterus primarily but later gain blood supply from these atypical sites and become parasitic fibroids. They are often a diagnostic clinical challenge and are confused for malignancies. They are resectable laparoscopically and are usually curable. It has been reported that the recurrence for such tumors are extremely uncommon [2].

CASE PRESENTATION

A 47-year-old female with no comorbidities presented with complaints of pain abdomen for the last 7 months. The pain was predominantly in the left lower quadrant, was dull

aching in nature and had a typical history of getting exacerbated at the onset of menstruation and reduced at the end of it. She had a history of undergoing laparoscopic myomectomy 4 years ago for uterine myoma. She has had 2 normal vaginal deliveries after which she has been sterilized laparoscopically. On examination, she was vitally stable with normal respiratory and cardiovascular examinations. Per abdominally no mass was palpable and was soft and non-tender on palpation.

Her routine investigations of complete blood counts and renal and liver functions were within normal limits. Contrast-enhanced CT scan was done to identify the cause of the abdominal pain. The scan reported a well-defined homogenous solid lesion in the left iliac fossa arising from the anterior abdominal wall of size 2.9*2.6*1.3cm adjacent to small bowel loops suggestive of abdominal wall leiomyoma with no surrounding infiltration (Figure 1). She was henceforth planned for and underwent laparoscopic excision of the lesion.

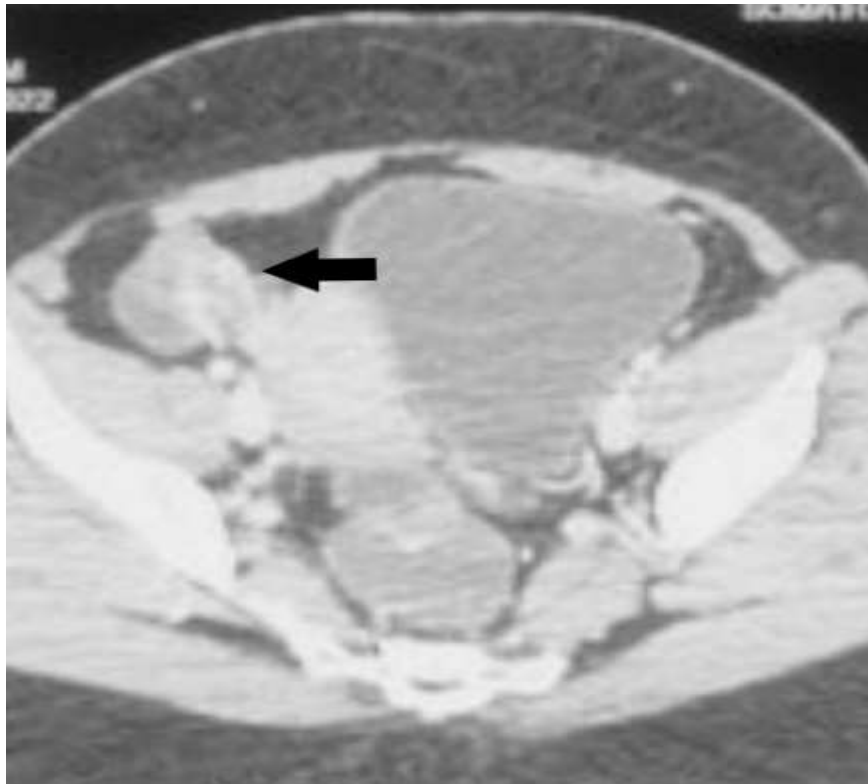


Figure 1: CECT abdomen showing pedunculated anterior abdominal wall fibroid (black arrow)

DISCUSSION

The most common pathology of the rectus abdominis in the anterior abdominal wall are desmoid tumors and rectus sheath hematoma. Less commonly, abscesses secondary to diverticulitis and actinomycosis can be seen. However, leiomyoma of the anterior abdominal wall arising from the rectus sheath is extremely rare. Leiomyomas are most commonly seen in the female genital tract mostly from the uterus. Nevertheless, they can also be seen arising from the ovaries and broad ligament as well. As it originates from smooth muscle cells, it is postulated that it can evolve from any structure containing smooth muscle cells such as arteries, bowel, etc. It is also said that such smooth muscle cells transform into a myoma due to sporadic somatic mutations, unknown hormonal synergistic functions, growth factor actions, and lipid metabolism disturbances^[21].

Uterine fibroids are usually asymptomatic and are found in approximately 20% of the general population and usually found as an incidental finding in abdominal scans which are done for different confounding ailments. However, when symptomatic they can cause abnormal uterine bleeding, tubal block causing infertility, pain, and urinary retention due to bladder compression. It is seen that abdominal wall myomas usually occur after uterine surgeries possibly due to implantation of myometrial tissues into the abdominal wall due to surgery and seen usually post uterine myomectomies. It has been reported to occur in cases of laparoscopic myomectomies more than open procedures^[31]. Moon et al in

2008 reported a case of abdominal wall leiomyoma three years after laparoscopic myomectomy^[41]. A primary anterior wall leiomyomas with no history of abdominal surgeries have also been reported forming a true de novo abdominal wall fibroid^[51]. In our case patient had a history of undergoing laparoscopic myomectomy 4 years before.

It has been found that adipocyte enhances the multiplication of leiomyoma cells via TNF- alpha which is a pro-inflammatory cytokine. It is usually associated with initiation and progression of uterine leiomyoma cells^[61]. Reports have shown that the parasitic fibroids initially originate from the uterus and later on gain their blood supply from atypical locations detaching themselves from the uterus. These types of parasitic fibroids are frequently seen in the retroperitoneum and pre-peritoneum^[51]. On histopathological examination, leiomyomas are well-defined tumours with a pseudo capsule. They don't show any evidence of atypia, necrosis or mitoses. Care is to be taken when such tumours are resected to avoid tumour spillage intra-abdominally given the same can cause tumour site recurrences. Meshplasty can be done when the post resection abdominal wall defect is significantly large^[71].

With the above diagnosis and proof of suspected abdominal wall leiomyoma patient was taken for diagnostic laparoscopy. Intraoperative she was found to have a globular well-encapsulated mass arising from the anterior abdominal wall with a stalk at the level of the rectus sheath (Figure 2).

Mass was excised and sent for histopathological examination which was reported to be a leiomyoma (Figure 3).

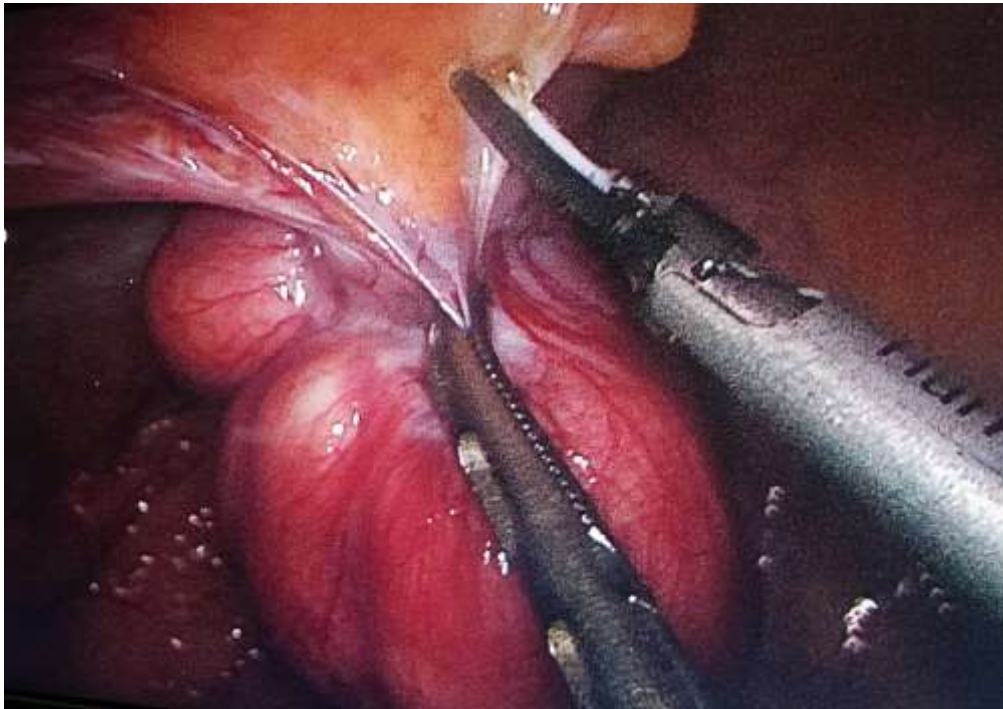


Figure 2: Globular Well-Encapsulated Mass Arising From The Anterior Abdominal Wall With A Stalk At The Level Of The Rectus Sheath.

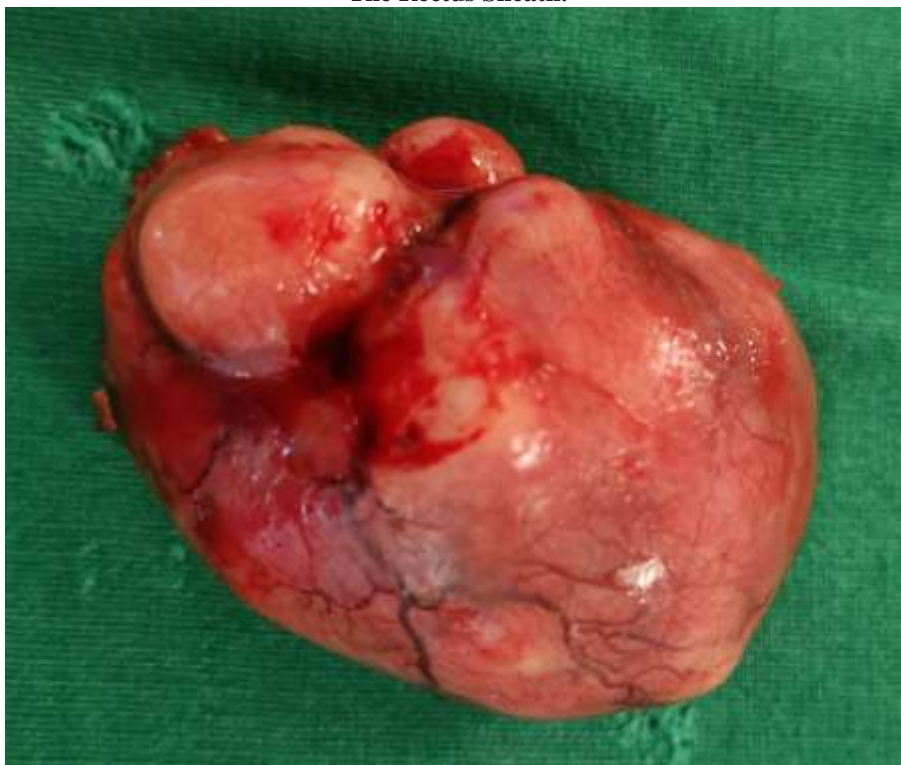


Figure 3: Laparoscopically excised leiomyoma of the anterior abdominal wall.



CONCLUSION

Anterior abdominal wall fibroids are a very rare clinical entity almost invariably occurring in association with previous myomectomies. It is considered a diagnostic dilemma by many operating surgeons due to its rare occurrence and frequent asymptomatic presentation. However due to the rapid advent of high resolution imaging, these lesions are being diagnosed increasingly and are usually confused with malefic malignant lesions. Hence it is vital to have a sound clinical acumen while encountering such lesions in general practice to avoid unnecessary surgical exploration while also taking care not to lose out on definite malignant entities.

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