

Primary Anterior Abdominal Wall Leiomyoma - A Rare Case with a Common Approach

Muhammad Izzuddin HAMZAN¹, Ariffuddin ISHAK², Normala BASIRON³

Kelantan, Malaysia

ABSTRACT

Extra-peritoneal leiomyoma is a rare condition with the recognized etiologic factor being direct seeding of the site by a prior uterine surgery with a right metabolic environment. We report a rare case of an isolated abdominal wall leiomyoma developing in a fertile woman with no known predisposing factor and highlight the common approach to establish the diagnosis so as to deliver appropriate treatment to the patient.

Keywords: Anterior abdominal wall, Atypical leiomyoma, Extra - peritoneal leiomyoma, Leiomyoma

Gynecol Obstet Reprod Med 2021;27(2):181-183

Introduction

Leiomyoma is the commonest benign tumor of the reproductive tract found in 20% of women in the reproductive age. Rather than leiomyoma, rhabdomyoma is the expected abdominal wall tumor considering its composition being of skeletal muscle and loose or aponeurotic connective tissue (1).

Case Report

A 43 years old, para 3 lady, presented with an abdominal mass in the left lower quadrant region since 2 years ago. There

was associated intermittent dull aching pain unrelated to menstrual cycles, urinary frequency and constipation. She had 1 previous Caesarean section done 20 years prior and had no history of steroid usage, hormonal therapy, gynecologic procedures or family history of cancer.

Clinically, there was a smooth surfaced, mobile, non-tender mass at the left lower abdominal quadrant measuring 13X8 cm. Abdominal computed tomography (CT) revealed a well encapsulated, 5.3X7.0 X 10.5 cm heterogeneously enhancing soft tissue mass arising from left external oblique muscle at the inguinal region. A clear fat plane with adjacent internal oblique and rectus abdominus muscle was seen. There was no intra-abdominal extension and normal uterus and bilateral ovaries were seen. Histopathologic examination (HPE) from fine needle biopsy is suggestive of leiomyoma. Intra-operatively, the abdomen was entered via the previous Caesarean scar (Figure 1). The incision was deepened into the subcutaneous tissue, external oblique muscle and its aponeurosis. There was a well-encapsulated mass between internal and external oblique space, attached inferiorly to the rectus sheath by loose connective tissue (Figure 2). It was easily dissected and completely removed after the feeding vessel branching from deep inferior epigastric artery was ligated. The wound was closed in layers with a drain placed in the subcutaneous plane. Immediate postoperative period was uneventful and the patient recovered well from the surgery.

The final histopathology examination report was consistent with benign leiomyoma which showed a well-circumscribed mass covered by thin fibrous tissue composed of interlacing fascicles of well-differentiated smooth muscle cells without mitosis, necrosis or atypia.

Informed consent was obtained from the patient in regards to the publication of the case report.

¹ Reconstructive Science Unit, Hospital University Sains Malaysia and School of Medical Sciences, University Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia

² Plastic Surgery Department, Hospital Raja Perempuan Zainab II, 15586, Jalan Hospital, Bandar Kota Bharu, 15200 Kota Bharu, Kelantan

³ Plastic & Reconstructive Surgery Department, Hospital Kuala Lumpur, Jln Pahang, Kuala Lumpur, Malaysia

Address of Correspondence: Muhammad Izzuddin Hamzan
Reconstructive Science Unit, Hospital
University Sains Malaysia and School of
Medical Sciences, University Sains
Malaysia, 16150 Kubang Kerian,
Kelantan, Malaysia
drmizzud@gmail.com

Submitted for Publication: 13.02.2019 Revised for Publication: 14.02.2019

Accepted for Publication: 04.04.2019 Online Published: 02.08.2021

ORCID IDs of the authors: MIH: 0000-0002-2143-3740

AI: 0000-0002-4256-7393 NB: 0000-0001-7655-1093

Quick Response Code:	Access this article online
	Website: www.gorm.com.tr
	e-mail: info@gorm.com.tr
	DOI:10.21613/GORM.2018.914

How to cite this article: Hamzan MI, Ishak A, Basiron N. Primary Anterior Abdominal Wall Leiomyoma - A Rare Case with a Common Approach. *Gynecol Obstet Reprod Med* 2021;27(2):181-183



Copyright© 2021.Hamzan et al. This article is distributed under a Creative Commons Attribution 4.0 International License.



Figure 1: Marking of the lesion and proposed incision through previous Caesarean section scar. Note the bulging of left lower quadrant of the abdomen



Figure 2: The tumor appearance after the elevation of skin flap & dissection of the external oblique muscle and its aponeurosis

Discussion

The uterus is a common site of development of leiomyoma in a female while extra-uterine leiomyomas are known to develop in the round ligament, utero-ovarian ligament, vagina and broad ligament (1). This tumor also can occur outside the pelvic region such as the on abdominal wall or even on the chest wall. Anterior abdominal wall leiomyoma is rare, generally benign and occasionally cause diagnostic dilemmas as they can mimic malignancy. It is thought to result from the seeding of myomatous tissue during gynecological surgeries and is more common in laparoscopic than in laparotomy procedures (2). However, there are few reported cases of isolated abdominal wall leiomyoma without previous gynecologic surgeries or the presence of uterine fibroids. Theoretically, leiomyoma can be found anywhere with smooth muscles including the abdominal wall. De novo leiomyoma can even develop in areas devoid of myomatous tissues or smooth muscle cells (1,3-6). Retroperitoneal myomas are even extremely rare and usually malignant in nature and commonly found in the

pelvis. This atypical entity had been described with a retroperitoneal leiomyoma found in the obturator fossa (7). Another rare location of this tumor that is worth to note was at extra-thoracic chest wall which was reported just recently (8).

Our patient had a Caesarean section twenty years back. However, we have yet to come across any literature suggesting seeding of smooth muscle cell from normal uterus onto the anterior abdominal wall (9). Recently there was 1 case report that has similar feature and presentation to our case which was operated via laparoscopically and was found that the tumor was arising from the anterior abdominal sheath (10). Our case has the common manifestations of intra-abdominal mass presenting with compressive symptoms. CT scan was performed to determine the site of origin as well as to differentiate the mass features and fine needle biopsy to define the nature of the benign or malignant tumor. Here, we would like to stress that the role of pre-operative histological diagnosis of abdominal wall leiomyoma is very important, so as to avoid unnecessary investigation (e.g. laparoscopy) and operation (e.g. laparotomy) (1,2). There are more than 300 distinct varieties of tumors, each with a characteristic biology. Moreover, tumors have a course of historical development and progression. Despite the clinical, radiological and pathological similarity between desmoids tumor and leiomyoma, the treatments differ (5). Thus, a clinically benign and rare, deep soft tissue smooth muscle tumor should be identified using stringent histologic criteria prior to any surgical intervention (11). Leiomyoma may need simple excision while minimizing tumor cells spillage to prevent recurrences. Whereas desmoid, soft-tissue sarcoma or dermatofibrosarcoma protuberans require aggressive, complete surgical resection to achieve local control and soft-tissue sarcoma needs additional adjuvant systemic therapy due to its metastatic nature (5,6).

Although primary anterior abdominal wall leiomyoma is a rare entity and poses a greater diagnostic challenge, common workout in tumor management should not be disregarded as it may avoid unnecessary investigation and operation.

Acknowledgments: Authors declared no conflict of interest nor there was financial support received for this manuscript report.

References

1. Parulekar SV. Rectus Sheath Leiomyoma. *J Postgrad Gynecol Obstet.* 2016;3(7):11-3.
2. Young Cho J, Woo JY, Hong H-S, Yang I, Lee Y, Hwang J-Y, et al. Anterior abdominal wall leiomyoma arising de novo in a fertile women: A case report. *J Korean Soc Radiol.* 2016;74(1):71-74. doi: 10.3348/jksr.2016.74.1.71.
3. D'souza C, Bhat S, Purushothaman, D. De novo growth of leiomyoma from rectus sheath: A rare presentation. *Ann Trop Med Public Health.* 2012;5:390-2.

4. Ernest Ong C, Siow SL. Case report: Leiomyoma of the anterior abdominal wall. *Med J Malaysia*. 2016;71(2):81-2. PMID: 27326950.
5. Abdelrahman M, Wang CW, Chen WF, Hou MM, Chang CJ, Hwang TL, et al. Solitary abdominal wall leiomyoma: 2 cases reports with immunohistochemical stain confirmation and literature review. *International Journal of Clinical Case Reports*. 2014;4(8):1-4.
6. Midya M, Dewanda NK. Primary anterior abdominal wall leiomyoma- a diagnostic enigma. *J Clin Diagn Res*. 2014; 8(10): NJ01-NJ02. doi: 10.7860/JCDR/2014/8995.4986.
7. Arab M, Farzaneh F, Ghavami B, Mohajeri S, Marzban Rad Z, Ashori A. A Rare Case of a Retroperitoneal Leiomyoma in the Obturator Fossa. *Iran Red Crescent Med J*. 2016;18(11):e28475.
8. Batihan G, Usluer O, Kaya SO, Aydogdu Z. Atypical deep somatic soft-tissue leiomyoma of extrathoracic chest wall: first case of the literature. *BMJ Case Rep*. 2018;11(1): e226668. doi: 10.1136/bcr-2018-226668.
9. Igberase GO, Mabiaku TO, Ebeigbe PN, Abedi HO. Solitary anterior abdominal wall leiomyoma in a 31-year-old multipara woman: A case report. *Cases J*. 2009; 2(1):113. doi: 10.1186/1757-1626-2-113.
10. Sel G. Case of an atypical located leiomyoma arising from rectus sheath. *J Surg Med*. 2018;2(3):408-9. doi: 10.28982/josam.442268
11. Billings SD, Folpe AL, Weiss SW. Do Leiomyomas of Deep Soft Tissue Exist? An analysis of highly differentiated smooth muscle tumors of deep soft tissue supporting two distinct subtypes. *Am J Surg Pathol*. 2001;25(9): 1134-42. doi: 10.1097/00000478-200109000-00003.