

Case Report

Surgical Treatment of Desmoid Tumor of Rectus Abdominis Muscle in a Pregnant Lady

Mohammed Abdullah Alawad Abdullah^{1*}, Mugtaba Elsheikh Ibrahim², Reem Mohammed Hassan³, and Nesreen Khidir⁴

¹Department of Laparoscopic General and Bariatric Surgery, Alsaaha Specialized Hospital, Sudan

²Medical Officer, Alsaaha Specialized Hospital, Khartoum, Sudan

³Registrar of Family Medicine, Alsaaha Specialized Hospital, Sudan

⁴Department of Bariatric and Metabolic Surgery, Hamad General Hospital, Qatar

***Corresponding author**

Mohammed Abdullah Alawad Abdullah, Laparoscopic General and Bariatric Surgery, Alsaaha Specialised Hospital, Khartoum, Sudan, Tel: 249912371232; Email: why2424@hotmail.com

Submitted: 29 June 2020

Accepted: 10 July 2020

Published: 13 July 2020

ISSN: 2379-0911

Copyright

© 2020 Alawad Abdullah MA, et al.

OPEN ACCESS**Abstract**

Desmoid tumors are benign neoplasms that can often arise from the abdominal wall. We report the case of an abdominal wall desmoid tumor in a female patient with a history of one cesarean section. Surgical resection of the mass was done with wide excision and safe margins. Histopathology confirmed the diagnosis of desmoid tumor.

INTRODUCTION

Desmoid tumors are abnormal growths arising from connective tissue. Abdominal desmoid tumors grow from the abdominal wall and usually are benign and fibrous similar to scar tissue [1]. Incidence is around 2-4 per million people per year [2]. Usually occur among people aged 10-40 years. They are also common in women during pregnancy and postpartum [2,3].

Desmoid tumors are relatively rare but are linked with hereditary familial adenomatous polyposis (FAP). About 32% of FAP patients develop a desmoid tumor in their lifetime [3]. The main issues with desmoid tumors that they are difficult to excise surgically aggressively invade the surrounding structures and have a high recurrence in 20-30% of cases [2].

The clinical presentation depends on the location and type of the desmoid tumor, but patients usually present with a painless lump.

CASE PRESENTATION

A 33 year old female presented to our hospital complaining of a painless mass in the upper left quadrant of her abdomen. She noticed the mass 1 year earlier during the first trimester of her second pregnancy. It gradually increased in size but did not cause her any abdominal discomfort nor intervened with her daily physical activity.

She has no history of any medical conditions, does not take any long-term medications, and is not a smoker. She has a history of cesarean section with her first child and a normal vaginal delivery with her second child.

During physical examination, the patient looked well, had BMI of 19 and her vital signs were normal. Examination of the abdomen revealed a palpable 3x4x5 cm mass in the upper left quadrant. The mass was painless, ill-defined and firm in nature. It was not attached to the skin but to the underlying rectus muscle. The hernial orifices were intact.

Blood investigations were all within the normal range. A computed tomography (CT) scan showed a homogenous, soft tissue density mass, arising from the left rectus abdominis muscle, showing no contrast enhancement on arterial and venous phases but faint contrast uptake on the delayed phase; most likely a desmoid tumor (Figure 1).

The patient underwent resection of the mass under general anaesthesia. It was a firm, fibrous, non-infiltrating mass located on the upper, left rectus muscle. Complete resection was done with 1cm safety margin removed as well (Figure 2-4).

The postoperative course was uneventful, and the patient went home on the second day after surgery. On the seventh postoperative day, the patient developed wound seroma and was treated with aspiration. Follow up with a CT scan was scheduled after 6 months from the date of the operation.

Histopathology revealed bland spindle cell lesions composed of monotonous cells in a background of collagenized stroma. The surgical cut edges were free of tumor. The features were consistent with fibromatosis and confirmed the diagnosis of a desmoid tumor (Figure 5).

DISCUSSION

Desmoid tumors are benign aggressive tumors that may increase hugely in size and mandate surgical resection ⁴.

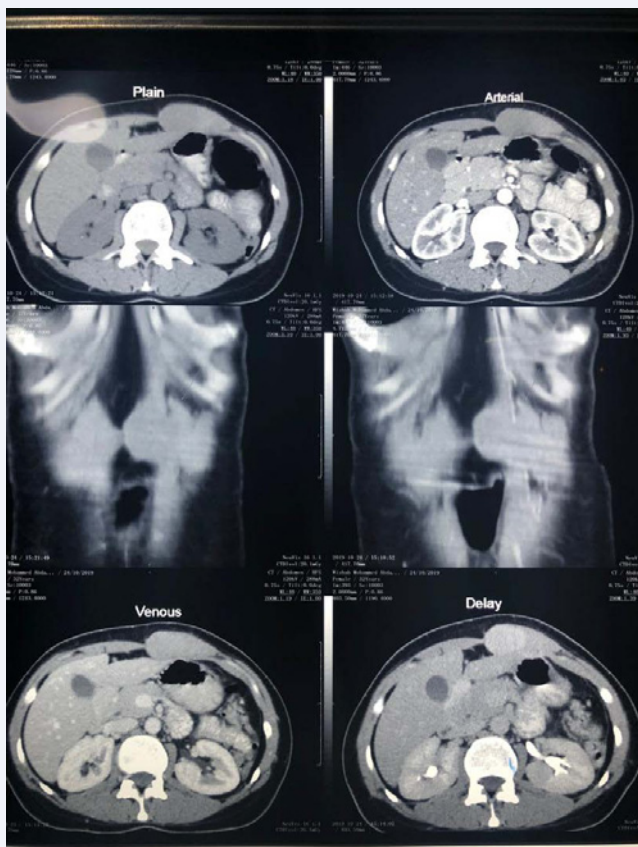


Figure 1 Preoperative CT showing a 3.5x1.5cm mass in the anterior abdominal wall. Intravenous administration of contrast shows mild enhancement in the delay phase.



Figure 2 Intraoperative picture of the tumor with poorly defined margins.

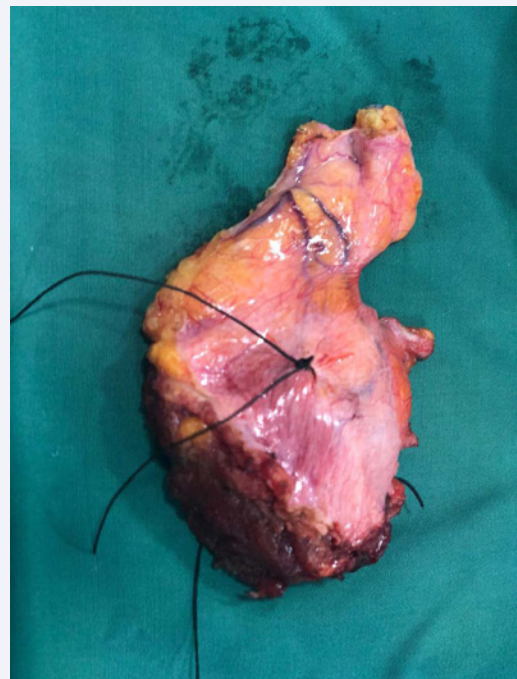


Figure 3 The mass after excision, showing the inner surface of the tumor.



Figure 4 On gross examination, mass size 9x6x2cm.

Pregnancy associated desmoid tumors were first described in 1832 [4,5]. Though there is a clear link between desmoid tumors and pregnancy, no rational explanations exist. Literature related the occurrence of desmoid during pregnancy to the hormonal and immunologic changes that occur during pregnancy [3]. Additionally, some desmoids regress without treatment

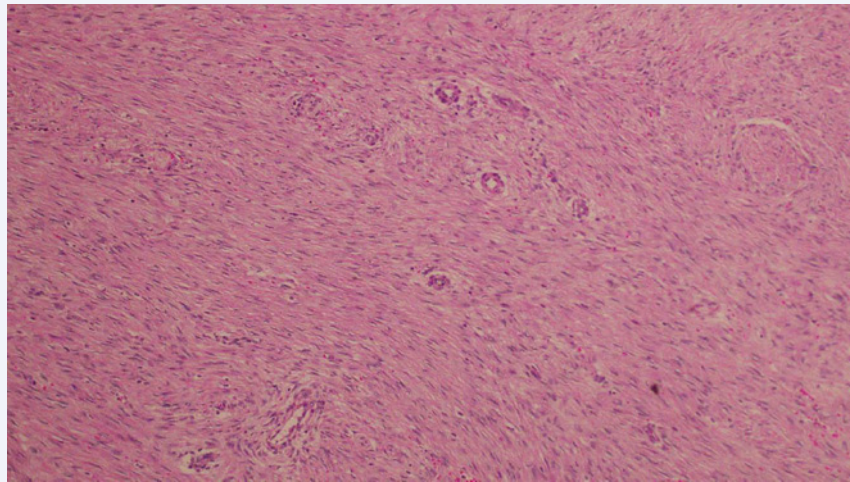


Figure 5 Histopathology microscopic findings show sweeping fascicles/ bundles of spindle cells with small slender nuclei and solid dark eosinophilic cytoplasm. Minimal mitotic activity. Long, thin-walled vessels parallel to one another.

after termination of pregnancy which may indicate that such explanation could be right [3]. Our patient had no history of abdominal trauma and the tumor did not regress in size one year after labor.

Colleagues described most tumor sizes ranged between 5 to 10 cm and arising from the right rectus abdominus [3]. The tumor size in our case was within this range but involved the left rectus abdominis muscle.

An important issue with desmoids is the high risk of recurrence in 20-30% of cases and usually recur at young age, large size tumors, and positive excisional margins [2,6,7]. In a systematic review of desmoid tumors, authors reported that in patients who had abdominal wall pregnancy associated desmoids had the highest 10-year progression free survival of 62%. For our patient, the histopathology test revealed negative margins. A close long-term monitoring and follow up CT scan have been scheduled for her.

CONCLUSION

Desmoid tumors are rare but need to be considered in patients presenting with an abdominal wall mass. Our patient was treated with surgical resection of the mass and will be followed for any risk of recurrence. Some desmoid tumors can spontaneously regress and so do not require surgical intervention. Therefore, management of the tumor usually depends on the presentation. Nevertheless, close long-term follow up is required for all these patients whether surgical or not.

ACKNOWLEDGEMENTS

We would like to thank Professor Ali Abdel Satir and Dr. Alaa for their assistance and providing us with the histopathology images, as well as the Radiology Department, especially Dr. Ahmed Osman, Head Department of Radiology.

REFERENCES

1. Desmoid Tumor. National Library of Medicine, Genetics Home Reference. 2019.
2. Raphael Pollock. Desmoid Tumors, National Organisation for Rare Disorders (NORD). 2019.
3. Robinson WA, McMillan C, Kendall A, Pearlman N. Desmoid tumors in pregnant and postpartum women. *Cancers (Basel)*. 2012; 4: 184-192.
4. Rathod S, Samal SK, Mahapatra PC. A large abdominal desmoid tumour associated with pregnancy and puerperium. *Int J Reprod Contracept Obstet Gynecol*. 2014; 3: 270-272.
5. Macfarlane J. Clinical Reports of the Surgical Practice of the Glasgow Royal Infirmary. David Robertson; Glasgow, UK. 1832; 314.
6. Nicolas Penel, Frédéric Chibon, Sébastien Salas. Adult desmoid tumors: biology, management and ongoing trials. *Curr Opin Oncol*. 2017; 29: 268-274.
7. Seung Ho Choi, Jung Ho Lee, Bommie F. Seo, Sang Wha Kim, Jong Won Rhie, Sang Tae Ahn. Desmoid Tumor of the Rectus Abdominis Muscle in a Postpartum Patient. *Arch Plast Surg*. 2012; 39: 439-441.

Cite this article

Alawad Abdullah MA, Ibrahim ME, Hassan RM, Khidir N (2020) Surgical Treatment of Desmoid Tumor of Rectus Abdominis Muscle in a Pregnant Lady. *J Surg Transplant Sci* 7(1): 1076.