

## Desmoid tumors of the abdominal wall:Two cases report.

*-Adel M. Al-Rekabi Assistant professor -surgeryFICMS- AL-Qadesiaa medical college Al-diwania Teaching hospital,Iraq.*

### الخلاصة

اورام الدسمويد هي اورام بطينة النمو مع ميل شديد نحو اختراق الانسجة المجاورة ولكنها لا تمتلك اية قوة انتشار.تم تسجيل حالتين من الاصابة بورم الدسمويد وهي لمريضتين سبق وان اجريت لهما عمليات فتح بطن(قيصرية)وكان الورم في كلتا الحالتين في جدار البطن عند الجرح القديم المندمل.اجريت فحوصات الامواج فوق الصوتية والمفراس ثم اجريت لهما عملية رفع الورم من جدار البطن مع رفع كامل للتليفات المصاحبة في الجرح السابق بغية منع الانتشار الموضعي للورم وبعدئذ رقت الهوة المتخلفة في جدار البطن بشبكة من البرولين الصناعي.اثبتت الفحوصات النسيجية الاصابة بورم الدسمويد.

### Abstract

Desmoid tumors are slow growing deep fibromatoses with aggressive infiltration of adjacent tissue but without any metastatic potential. We report on two female patients with desmoid tumor of the abdominal wall who underwent primary resection and proline mesh repair. Both patients had a history of an earlier abdominal surgery. Preoperative evaluation included abdominal ultrasound, and computed tomography. The histology in both cases revealed a desmoid tumor. Complete surgical resection and proline mesh repair is the first line management of this tumor entity.

**Keywords:** Desmoid, abdominal wall, surgery.

### Introduction

Desmoid tumors are benign myofibroblastic neoplasms originating from the muscle aponeurosis and classified as deep fibromatoses (1). They constitute 3% of all soft tissue tumors and 0.03% of all neoplasms (2). Despite their aggressive local infiltration, desmoid tumors lack a metastatic potential (3). However, because of this local infiltration and compression of surrounding structures, a high recurrence rate exists and in anatomic locations with restricted access to surgical resection desmoid tumors can lead to death (4). Especially in patients with familial adenomatous polyposis (FAP) undergoing colectomy desmoid tumors are the leading cause of morbidity and mortality (5). Main locations of desmoid tumor occurrence are the proximal extremities, the abdominal wall and the mesenteric intestine in patients with FAP

(6). In sporadic cases, they occur in localizations of trauma, and scars or irradiation. The therapeutic management of these tumors is still controversial.

## **Case presentation**

### **Case 1**

A 20-year-old female recognized a right lower abdominal wall tumor. In her history she reported a cesarean section and one pregnancy in 2006. On clinical admission, a painless tumor was investigated without any contact to hip bone structures. Analyzed blood parameters were within normal range. Preoperative US revealed a right lower abdominal wall tumor of unknown dignity. The resection of the tumor with wide local excision of the abdominal wall muscles with a safety margin of 4 cm and the defect was covered with prolin-Mesh. The postoperative course was uneventful and the patient was discharged at the 5<sup>th</sup> postoperative day.

### **Case 2**

A 37-year-old female recognized an initially painless tumor in the right lower abdominal wall. In her history, the patient reported two cesarean section in 2000 and 2003. On admission, a palpable demarcated fixed tumor in the right lower third of the lateral abdominal wall was investigated. Analyzed blood parameters were within normal range. The US revealed a right abdominal wall tumor of unknown dignity. Resection of the tumor with wide local excision of the abdominal wall muscle with a safety margin of 4 cm replaced by a prolin mesh<sup>®</sup>. The postoperative course was uneventful and the patient was discharged at the 4<sup>th</sup> postoperative day.

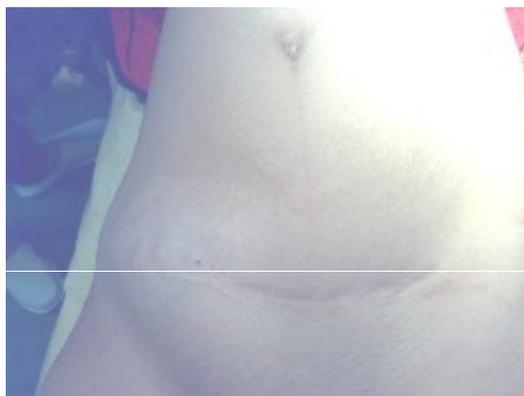
## **Discussion**

Desmoid tumors are benign deep fibromatoses, (1). They are primary located abdominally or intraabdominally (2). Whereas only sporadic cases describe localization within the thorax wall and these two cases were in the abdominal wall extraperitoneally (7). The desmoid tumor is often associated with female gender and both of our cases were females (8) and occasionally with surgical trauma as our cases gave history of caesarian section (8). It has a higher prevalence in women who experienced pregnancy and our patients gave history of multiple pregnancies (6). CT scan localizes the tumor and excludes metastasis and we evaluate our patient by ultrasonography and CT scan which revealed the extraperitoneal location in both cases and

without any intraperitoneal extension and due the limitation in MRI this investigation was not performed(4). Therefore, a differentiation from other solid tumors is impossible using morphological criteria (9).The most effective treatment of accessible and smaller desmoid tumors is still the resection with negative margins, we performed wide local resection in both cases including a free margin of 2 cm (9).The operation in both case were feasible and the masses were accessible, however the size of the tumor was large.Surgery always aims at radical tumor resection with free margins, which, depending on localization of surgery, may leave major soft tissue defects behind and we faced with wide defect left behind including the rectus muscle and the rectus fascia (10). Albeit in our study the reconstruction of the abdominal wall was performed with a proline mesh as shown in the figures (1, 2, 3, and 4).The post-operative period was smooth without any evidence of wound infection or sinus formation and both patients were subjectively and objectively doing very well.One year and two years follow-up of the case one and case two respectively showed: no evidence of local recurrence and no abdominal hernia or sign of infection

## **Conclusions**

The treatment of desmoid tumors remains enigmatic. Non-surgical treatment resulted in diverse and unpredictable outcome and is considered to be an opportunity in patients with unresectable lesions. Radical resection with clear margins remains the principal determinant of outcome.



**Figure (1); scar of previous C-section with a desmoid tumour at its right side**



**Figure (2): mobilization of a desmoid tumor within the scar in the anterior abdominal wall.**



**Figure (3); completely excised desmoid tumor with wide local excision of the fascia.**



**Figure (4); proline mesh repair of the defect after complete excision of a desmoid.**

## **References**

- Mentzel T, Katenkamp D ces: Myofibroblastic tumors. Brief review of clinical aspect,diagnosis and differential diagnosis : Pathologie 1998, 19:176-186
- Fletcher CDM;myofibroblastic tumors;verh Dtsch Ges path.1998,82;75-82
- Lewis JJ, Boland PJ, Leung DH, Woodruff JM, Brennan MF: The enigma of desmoid tumors:Ann Surgery 1999 Fibromatosis in the adult.,229;866-872
- Hasegawa SL, Fletcher CDM. Fibromatosis in the adult. Adv Pathol 1996, 9:259-275.
- Gansar GF, Markowitz IP, Cerise EJ: Thirty years of experience with desmoid tumors at Charity Hospital. Am Surg 1987, 53:318-319
- De Cian F, Delay E, Rudigoz RC, Ranchere D, Rivoire M : Desmoid tumor arising in a cesarean section scar during pregnancy: monitoring and management: Gynecol Oncol 1999, 75:145-148
- Casillas J, Sais GJ, Greve JL, Iparraguirre MC, Morillo ; Imaging of intra- and extraabdominal desmoid tumors: Radiographics 1991, 11:959-968
- Shields CJ, Winter DC, Kirwan WO, Redmond HP: Desmoid tumours: Eur J Surg Oncol 2001, 27:701-706
- Sutton RJ, Thomas JM: Desmoid tumours of the anterior abdominal wall: Eur J Surg Oncol 1999, 25:398-400
- Leber GE, Garb JL, Alexander AI, Reed WP: long term complications associated with prosthetic repair of incisional hernias. Arch Surg 1998, 133:378-382.