"Rare Presentation of Recurrent Desmoid Tumor with Intra-Abdominal Extension Following Abdominoplasty "

ABSTRACT

Introduction: Body musculoaponeurotic structures are the source of fibrous neoplasms known as desmoid tumors. Desmoid tumors of the abdominal wall are uncommon, although they have a high chance of recurrence and can be aggressive locally. In young, fertile women, these tumors are more prevalent. In many cases, they happen during or after pregnancy. Body musculoaponeurotic structures are the source of fibrous neoplasms known as desmoid tumors. Desmoid tumors of the abdominal wall are uncommon, although they have a high chance of recurrence and can be aggressive locally. In young, fertile women, these tumors are more prevalent. In many cases, they happen during or after pregnancy.

Aims & Objectives: The study's goals were to investigate the uncommon co-occurrence of pathology or illness.

Materials & Methods: We report the case of a postmenopausal woman, age 63, who had an anterior abdominal wall desmoid tumor. Her family background was unrelated. After being removed and biopsied during abdominoplasty, an accidental growth was found to be a desmoid tumor with free margins. The patient complained of vague stomach pain and a heaviness one year later. The scar from the previous abdominoplasty was cut to preserve the attractive result. A recurring desmoid tumor was identified after a big mass that originated from the abdominal wall and extended intra-abdominally was removed.

Conclusion: Postmenopausal women seldom have recurrent anterior abdominal wall desmoid tumors, which are locally aggressive and have a high chance of returning. In abdominoplasty, desmoid tumor filaments may seed deeply intra-abdominally during abdominal wall restoration. Therefore, prior to abdominal wall restoration, sufficient safe margins must be taken. Following surgery, surgeons should maintain a high level

KEY WORDS: Abdominoplasty, Fibromatosis, Aggressive , Neoplasm Recurrence, Local

BACKGROUND

Musculoaponeurotic structures in the body are the source of fibrous neoplasms known as desmoid tumors. The name "desmoid," which comes from the Greek word "Desmos," meaning tendon-like, was first used by Muller in 1838 [1]. They account for around 0.03% of all neoplasms and 3% of all soft tissue tumors [2]. Even if they have a strong local invasion, these tumors don't have the ability to spread to other places [3]. They are particularly prevalent in women who are fertile and are usually found in the 25–40 age range. The anterior

abdominal wall is most frequently linked to these malignancies, with an estimated 50% incidence rate. [4]

MATERIALS AND METHODS:

In order to address her abdominal laxity, a 63-year-old postmenopausal woman with para-8 presented to our cosmetic surgery facility for a body-contouring procedure. In order to remove and re-drape the extra abdominal skin, abdominal folds, and to correct recti divarication, an abdominoplasty procedure was scheduled. There was no palpable abdominal mass seen during examination, and the patient had not had any radiological testing done before surgery.

A solid lump in the abdominal wall was discovered by accident during abdominoplasty. In the para-umbilical region, it was a well-organized, firm structure that measured 3 by 2 cm and emerged from the midline of the rectus sheath, both superior and inferior to the umbilicus. It was completely removed without any noticeable margin involvement.

The tumor was removed along with the umbilicus, and neoumbilical repair was performed. Rectus sheath plication was done, and the abdominal wall defect was mainly closed. An examination of the histology revealed a desmoid tumor with free margins. According to the patient's medical history, there was no family history of Gardener syndrome, familial adenomatous polyposis syndrome (FAP), or desmoid tumors. The patient was routinely monitored at the clinic following discharge. She was pleased with the outcome and thought it looked good.

However, the patient's complaints were ambiguous one year after the abdominoplasty; she felt as though her abdomen was heavy and uncomfortable. An abdominal checkup revealed nothing unusual. After a CT scan, a huge abdominal tumor (8×9×4 cm) that extended intra-abdominally and emerged from the abdominal wall was discovered (Figure 1). A team of general surgeons collaborated to design a second procedure. To improve the aesthetic result, the scar from the prior abdominoplasty was re-incised. A solid mass with an intra-abdominal extension that was adhered to the small bowel but readily separated from the tumor was discovered growing from the repaired abdominal wall (Figures 2, 3).

Figure 1. CT scan shows intra-abdominal extension of the desmoid tumor, which is adherent to the abdominal bowel.

Figure 2. Excision of the desmoid tumor after secondary resection with intra-abdominal dissection.

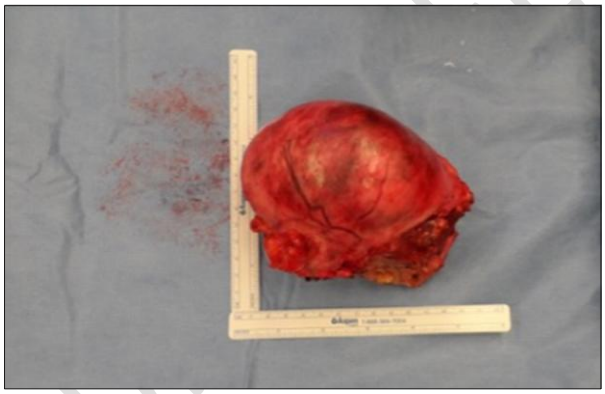

Figure 3. The dimensions of the tumor after excision.

A non-absorbable polypropylene surgical mesh was used to rebuild the abdominal wall defect after a frozen section verified a broad local excision with a 3-cm free margin of healthy tissue (Surgipro, Covidien, Mansfield, MA, USA). The patient's recovery after surgery went smoothly. She was released from the hospital after a seven-

day stay. The diagnosis of a desmoid tumor with free margins was validated by the histology report. Clinic follow-ups were planned on a regular basis.

The oncology team advised against adjuvant chemotherapy because the material showed free margins. Six months after surgery, an MRI was conducted, but it revealed no recurring or persistent tumor. For two years, the patient was monitored at the outpatient clinic, and she fully recovered throughout that time. Neither an abdominal hernia nor a functional impairment were present.

DISSCUSSION:

Myofibroblastic neoplasms that are benign are called desmoid tumors. They behave in a way that is in between that of fibrosarcomas and benign fibrous lesions [1]. Known as deep fibromatoses, they are derived from the muscle aponeurosis [2,4].

During or after pregnancy, these tumors are frequently linked to fertile women. It has been demonstrated that estrogen affects fibroblast proliferation. Regression has been observed in several patients during menopause [4]. Desmoid tumors are also known to be associated with abdominal and pelvic surgery, as well as with trauma, estrogen medication, FAP, and Gardner syndrome [5–10].

Extra-abdominal, intra-abdominal, multiple, multiple familial, and Gardner's syndrome are the five subgroups of desmoid tumors. Desmoid tumors of the abdominal wall develop from musculoaponeurotic structures. Most often, the fascial coverings of the internal oblique and rectus muscles are damaged. Less frequently, though, are malignancies that arise from the transversalis muscle or fascia and the external oblique muscle [11].

Radical resection with free margins should be the goal of surgical care of desmoid tumors; nevertheless, as in our instance, this may leave soft tissue abnormalities. However, the best course of action to lower the likelihood of local recurrence is total surgical excision. adjunctive therapy,

For the excision of extensive instances, treatments such as chemotherapy and repeat surgery can be necessary [12,13]. For such tumors, open surgical resection has been the accepted treatment. According to recent reports, laparoscopic procedures could gain traction in the future if they show encouraging outcomes and no rise in recurrence [14]. In the second surgery, however, we decided on a more traditional strategy because the tumor was recurrent and originated in the abdominal wall following abdominoplasty.

It has been reported that the recurrence rate of desmoid tumors might reach 70 percent. One of the main risk factors for recurrence is a positive surgical margin [15,16]. Surgeons should therefore maintain a high level of suspicion regarding the potential recurrence of tumors. Although they might be aggressive locally, they are known to be benign tumors [17]. They could result in fistulization or intestinal blockage. Because of these factors, in the

past, severe treatment methods were used to eradicate the illness entirely. The presence of abdominal desmoids in the retro-peritoneum, mesentery, or abdominal wall is more common in people with Gardner syndrome [4,18].

A radical resection with intra-operative margin assessment by frozen section, followed by prompt mesh rebuilding, may be a safe and successful treatment for recurring abdominal desmoid tumors [19]. MRI follow-up is advised for early recurrence detection. The optimal MRI time during follow-up and the necessary frequency, however, are not universally agreed upon in the literature.

CONCLUSION:

In postmenopausal women, recurrent anterior abdominal wall desmoid tumors are uncommon, locally aggressive, and very likely to recur. Deep intra-abdominal seeding of desmoid tumor filaments may occur after abdominal wall restoration in abdominoplasty. Therefore, before repairing the abdominal wall, adequate safe margins must be taken. Surgeons should maintain a high index of suspicion for tumor recurrence after surgery.

REFERENCES:

1. Shields CJ, Winter DC, Kirwan WO, Redmond HP: Review desmoid tumors. Eur J Surg Oncol, 2001; 27(8): 701–6
2. Fletcher CDM: Myofibroblastic tumors: An update. Verh Dtsch Ges Path, 1998, 82: 75–82
3. Kiel KD, Suit HD: Radiation therapy in the treatment of aggressive fibromatoses (desmoid tumors). Cancer, 1984; 54: 2051–55
4. Economou A, Pitta X, Andreadis E et al: Desmoid tumor of the abdominal wall: A case report. J Med Case Rep, 2011; 5: 326
5. Crago AM, Denton B, Salas S et al: A prognostic nomogram for prediction of recurrence in desmoid fibromatosis. Ann Surg, 2013; 258(2): 347–53
6. Teo HEL, Peh WCG, Shek TWH: Case 84: The desmoid tumor of the abdominal wall. Radiology, 2005, 236: 81–84
7. Kumar V, Khanna S, Khanna AK, Khanna R: Desmoid tumors: The experience of 32 cases and review of the literature. Indian J Cancer, 2009; 46: 34–39
8. Lahat G, Nachmany I, Itzkowitz E et al: Surgery for sporadic abdominal desmoid tumor: Is low/no recurrence an achievable goal? IMAJ, 2009; 11: 398–402
9. Overhaus M, Decker P, Fischer HP et al: Desmoid tumors of the abdominal wall: A case report. World J Surg Oncol, 2003; 1(1): 11

10. Efthimiopoulos GA, Chatzifotiou D, Drogouti M, Zafiriou G: Primary asymptomatic desmoid tumor of the mesentery. Am J Case Rep, 2015; 16: 160–63

11. Casillas J, Sais GJ, Greve JL et al: Imaging of intra and extra-abdominal desmoid tumors. Radiographics, 1991; 11: 959–6

12. Ramirez RN, Otsuka NY, Apel DM, Bowen RE: Desmoid tumor in the pediatric population: A report of two cases. J Pediatr Orthop B, 2009; 18(3): 141–44

13. Bertani E, Chiappa A, Testori A et al: Desmoid tumors of the anterior abdominal wall: Results from a monocentric surgical experience and review of the literature. Ann Surg Oncol, 2009; 16(6): 1642–49

14. 14 Meshikhes AW, Al-Zahrani H, Ewies T: Laparoscopic excision of abdominal wall desmoid tumor. Asian J Endosc Surg, 2016; 9(1): 79–82

15 .Huang PW, Tzen CY: Prognostic factors in desmoid- type fibromatosis: A clinicopathological and immunohistochemical analysis of 46 cases.

16. Meazza C, Bisogno G, Gronchi A et al: Aggressive fibromatosis in children and adolescents: the Italian experience. Cancer, 2010; 116(1): 233–40

17. Lewis JJ, Boland PJ, Leung DH et al: The enigma of desmoid tumors. Ann Surg, 1999; 229(6): 866–72; discussion 872–73

18. Palladino E, Nsenda J, Siboni R, Lechner C: A giant mesenteric desmoid tumor revealed by acute pulmonary embolism due to compression of the inferior vena cava. Am J Case Rep, 2014; 15: 374–77

19. Bhama PK, Chugh R, Baker LH, Doherty GM: Gardner's syndrome in a 40-year-old woman: Successful treatment of locally aggressive desmoid tumors with cytotoxic chemotherapy. World J Surg Oncol, 2006; 4: 96