

## CASE REPORT

# Desmoid Tumor: Rare Abdominal Wall Lump in a Multiparous Woman

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## ABSTRACT

**Background:** Desmoids are rare tumors. Abdominal wall desmoids are more common in women of reproductive age, especially postpartum women. Here we present a case of desmoid tumor in a 37-year-old multiparous woman, who came with the complaint of a slowly growing painless abdominal lump.

**Case report:** A 37-year-old multiparous female presented with the complaint of a gradually increasing, painless abdominal lump. On physical examination, a well-defined, firm, mobile mass was palpated in the suprapubic region. Ultrasound revealed a homogeneous hypoechoic lesion in the right anterolateral abdominal wall. Computed tomography (CT) of the abdomen showed a well-defined homogeneous mass in relation to the inferior aspect of right rectus abdominis muscle. These clinical and imaging features were highly suggestive of abdominal wall desmoid, which was confirmed on fine needle aspiration cytology and postoperative tumor histopathology.

**Discussion:** Desmoids are uncommon benign, locally aggressive fibrous lesions that have an insidious course. Conventionally, these are classified as abdominal desmoids (occurring in abdominal wall, mesentery, or retroperitoneum) and extra-abdominal desmoids (affecting shoulder girdle, trunk, lower extremities, etc.). The definitive diagnosis of desmoid has to be established on histopathology. Wide local excision remains the definitive treatment of abdominal wall desmoids. Radiation therapy, chemotherapy, and endocrine therapy are the other treatment options.

**Keywords:** Abdominal wall, Desmoid, Multiparous woman.

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## BACKGROUND

Desmoids are rare tumors. Abdominal wall desmoids are more common in women of reproductive age, especially

in postpartum women. Some authors have suggested that the cause is the stretching and tearing of abdominal wall musculature during fetal growth, while others postulate the role of estrogen in the growth.<sup>1</sup> Here we present a case of desmoid tumor in a 37-year-old multiparous woman, who came with the complaint of a slowly growing painless abdominal lump.

## CASE REPORT

A 37-year-old multiparous female presented to our hospital with a gradually increasing painless lump in the hypogastrium for the past 1 year. There was no history of any previous surgery or significant trauma. She had past history of three vaginal deliveries. Her last child was born 3 years back. Her vitals were stable. On physical examination, the abdomen was soft, nontender and there was no evidence of organomegaly. A well-defined, firm mobile mass was palpated in the suprapubic region. Ultrasound revealed a homogeneous hypoechoic lesion in the right anterolateral abdominal wall with no necrosis/calcification/increased vascularity. Noncontrast CT of the abdomen showed a well-defined homogeneous mass in relation to the inferior aspect of right rectus abdominis muscle measuring 10 × 10.5 × 7 cm. The mass was isodense to adjacent muscles on noncontrast scans and was seen to cross the midline with involvement of left rectus abdominis muscle also. Mild fat stranding was seen in the adjacent subcutaneous planes. No evidence of calcification/hemorrhage was seen within it (Fig. 1A). The lesion showed homogeneous enhancement, on postcontrast scan (Fig. 1B). These clinical and imaging features were highly suggestive of abdominal wall desmoid, which was confirmed on fine needle aspiration cytology. Patient underwent complete excision of the tumor and the diagnosis was also confirmed on tumor histopathology. On 6 months follow-up with ultrasound, there was no evidence of any recurrence.

## DISCUSSION

Desmoids are uncommon benign, locally aggressive fibrous lesions with insidious course. The term desmoid is derived from the Greek word “desmos,” which means band or tendon.<sup>2</sup> Desmoid tumors are uncommon lesions with estimated incidence of 3.7 new cases per million individuals, per year and are seen more commonly in

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**Figs 1A and B:** (A) Axial noncontrast CT section showing a homogeneous, well-defined, mass (arrow) in the lower right anterolateral abdominal wall crossing the midline, with minimal fat stranding in the adjacent subcutaneous planes. (B) Sagittal reformatted contrast-enhanced CT image showing the mass (arrow) in the anterior abdominal wall, showing homogeneous enhancement

females.<sup>3</sup> They may occur at any age; however, peak incidence is seen in 3rd decade. These mysterious tumors have been associated with trauma/previous surgery at the site of the lesion and also with genetic disorders like Gardner's syndrome.<sup>3</sup>

Desmoids belong to a group of disorders called fibromatosis where fibroblastic proliferation occurs with associated inflammation or neoplasia. Desmoid tumors do not metastasize, but they invade locally. These tumors have a high tendency to recur, postexcision. Conventionally, these are classified as abdominal desmoids (occurring in the abdominal wall, mesentery, or retroperitoneum) and extra-abdominal desmoids (affecting shoulder girdle, trunk, lower extremities, etc.). However, the histological findings in both these desmoids are similar.<sup>3</sup>

Abdominal wall desmoids usually measure 5 to 15 cm in size and arise from muscular aponeurosis of rectus muscle and internal oblique muscle.<sup>4</sup> Occasionally, these can cross the midline and may extend into the abdominal cavity or may erode the adjacent bone. These are typically seen in young gravid females during first year after childbirth or after abdominal surgery. Pelvic desmoid<sup>4</sup> is a variant of abdominal desmoid differing from it by its location in the iliac fossa or the pelvis. Unlike their abdominal counterparts, these are unrelated to pregnancy. These sometimes can be mistaken as ovarian or mesenteric tumors. Large tumors may encroach on urinary bladder, vagina, or rectum and may cause compressive symptoms.

The appearance of desmoid tumors is variable depending on fibroblast proliferation, fibrosis, collagen content, and vascularity. On ultrasonography,<sup>5</sup> these may be isoechoic or hypoechoic with smooth, sharply defined margins and showing no or minimal flow on color Doppler. Occasionally marked vascularity may be seen in cases of aggressive fibromatosis.<sup>6</sup> The CT and magnetic

resonance imaging are useful imaging techniques, which help in the evaluation of the size, site, and extent of the lesion, as well as for monitoring therapeutic response and assessment of complications.<sup>3,4</sup> On CT scan, desmoids may appear homogeneous or heterogeneous. They may be hypo-, iso-, or hyperdense and show variable postcontrast enhancement. The differential diagnoses include benign fibrous tumor, hematoma, fibrosarcoma, lymphoma, rhabdomyosarcoma, neurofibroma, and primitive neuroectodermal tumor. However, the definitive diagnosis has to be established on histopathology.<sup>7</sup>

Wide local excision remains the definitive treatment of abdominal wall desmoids. But these tumors have tendency to recur, with reported postsurgical recurrence rate of up to 30%.<sup>4</sup> The rate of recurrence is less if there is sufficient normal tissue surrounding the resected tumor. Radiation therapy is reserved for patients with inoperable or incompletely excised tumors and lesions showing repeated recurrence. Desmoid tumors have also been successfully treated with chemotherapy and endocrine therapy.<sup>8</sup>

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