

## Case Study

Comment [Steve AF01]: Case Report

# Pelvic Desmoid Tumour Imitating Uterine Leiomyoma in a Nigerian Premenopausal Woman.

## ABSTRACT

**Aim:** To describe a rare case of pelvic desmoid tumour simulating as a huge uterine leiomyoma causing a diagnostic dilemma in a premenopausal woman.

**Case Presentation:** This was a 44 year old, para 2 (2 alive) who was referred to our gynaecology clinic from secondary ??? on account of slowly increasing abdominal swelling of 2years duration. There was associated mild to moderate dull lower abdominal pain that did not radiate to any other part of the body. There was no change in her monthly menstrual flow. Physical examination revealed a pelvic mass about 32weeks pregnancy size and firm. Computed Topography scan showed a huge pedunculated sub-serous uterine fibroid. A huge mass adherent to the anterior surface of the body of the uterus was completely surgically excised at exploratory laparotomy. Histology of the excised tumour revealed a definitive histological diagnosis of pelvic desmoid tumour. The patient was clinically stable and discharged home 10 days post operation to be followed-up on out-patient gynaecology clinic basis.

Comment [Steve AF02]: a secondary health care facility???

Comment [Steve AF03]: 2 years duration ...space

Comment [Steve AF04]: No comments about important negatives, GI symptoms...it could have been an ovarian tumour

Comment [Steve AF05]: space...32 weeks

**Discussion:** Pelvic desmoid is a rare mesenchymal tumour caused by abnormal proliferation of fibroblasts. It is three times commoner in women and occurs mostly between 25 and 35 years of age which correspond to the same age peak incidence for uterine fibroids. The tumour can easily be misdiagnosed as uterine leiomyoma and imaging cannot reliably distinguish the two conditions.

Comment [Steve AF06]: more common

Comment [Steve AF07]: space

**Conclusion:** Pelvic desmoid tumour should be considered as a close differential diagnosis in pre-menopausal women who present with abdominal swelling. Relevant clinical history, Radiological imaging and Histopathological assessment are essential in making prompt accurate diagnosis.

Comment [Steve AF08]: revise...a tumour that is rare cannot be a "close differential"....."a differential" is better...

Comment [Steve AF09]: how does this help in making a diagnosis of Desmoid tumour?

**Key words:** Pelvic Desmoid Tumour, Uterine Leiomyoma, Babcock University, Nigeria

## 1. INTRODUCTION

Desmoid tumours are mesenchymal tumours which arises from excessive proliferation of fibroblasts [1]. They are relatively rare and account for about 0.03% of all soft tissue tumours [2]. Even though the exhibit benign morphology they are still classified as intermediate malignant neoplasm due to their great propensity to infiltrate adjacent structures and their high

rate of local recurrence even after radical excision [3,4]. Desmoid tumours can be classified into extra-abdominal, abdominal wall and intra-abdominal; intra-abdominal being the least common [5].The aetiology is not known but it has been associated with trauma including previous surgeries and estrogenic hormonal abnormalities, a family history of polyposis coli [4,6]. This is probably why it is 3 times more common in women than in men and occurs mostly between 25 and 35years [4,6,7]. These tumours cannot be distinguished from other soft tissue tumours by imaging [1].We report a sporadic case in a 44 year old pre-menopausal Nigerian woman .

**Comment [Steve AF010]:** delete...and and replace with comma

**Comment [Steve AF011]:** delete comma and replace with and

**Comment [Steve AF012]:** space

## 2. CASE REPORT

This was a 44 year old, para 2 (2 alive) who was referred to our gynaecology clinic from secondary on account of slowly increasing abdominal swelling of 2years duration. There was associated mild to moderate dull lower abdominal pain that did not radiate to any other part of the body. There was no change in her monthly menstrual flow. There was nothing remarkable in her family history. She had been to two different primary and secondary health facilities where a clinical diagnosis of uterine fibroid was made following abdominal ultrasound scanning.

**Comment [Steve AF013]:** a secondary health facility

**Comment [Steve AF014]:** space

**Comment [Steve AF015]:** Scanty history ! kindly add important negatives...GI symptoms

General physical examination was essentially normal. The vital signs were within normal limits.

### 2.1 Systemic Examination

The main systemic examination findings were only found in the abdomen which revealed a pelvic mass of about 32weeks pregnancy size. There was area of tenderness in the right and left iliac fossae.

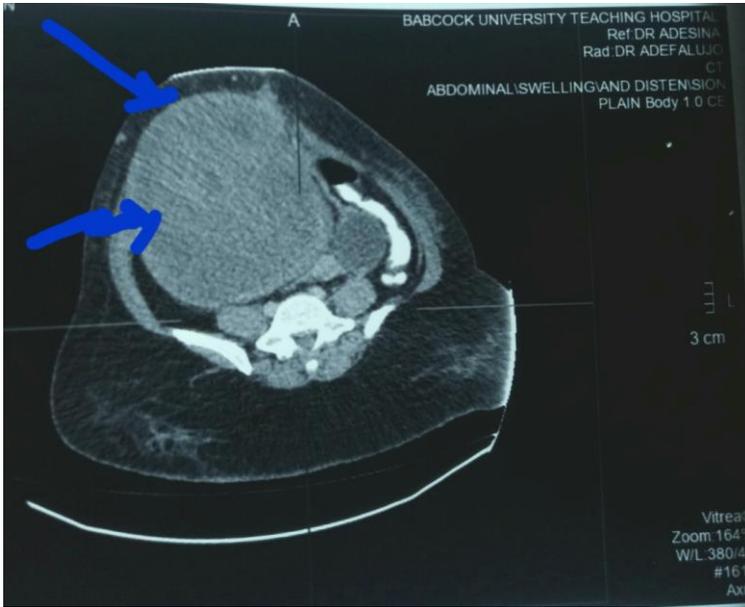
**Comment [Steve AF016]:** space

**Comment [Steve AF017]:** No pelvic examination included for a pelvic mass?

### 2.2 Imaging

Abdominal Computed Tomography scan finding showed a bulky uterus with a huge mixed density mass, anterior to the uterine body and postero-superior to the urinary bladder attached to the anterior aspect of the uterine body by a short stalk, and measuring 17.9x20.7x22.5cm in its antero-posterior, transverse and longitudinal diameters respectively with a conclusion was huge pedunculated sub-serous uterine fibroid. (Figures 1 and 2)

**Comment [Steve AF018]:** No blood investigations or pre-op blood work up.. The authors were seemingly convinced this was a benign tumour even before surgery No efforts were documented to show they thought otherwise in terms of relevant history, physical examination and investigation



**Figure 1:** Computed Tomography scanogram showing huge mixed density mass



**Figure 2:** Computed Tomography scanogram showing huge mixed density mass adjacent to the anterior abdominal wall

**Comment [Steve AFO19]:** the patients name is showing on this CT scan....kindly delete patient name before sending this article back ...its unethical to have patient,s name appear in a scientific journal

### 2.3 Intra-operative findings

She gave consent for exploratory laparotomy and possible hysterectomy. At surgery a huge mass adherent to the anterior surface of the body of the bulky uterus with normal fallopian tubes and ovaries were found. The mass was completely surgically removed with a subtotal hysterectomy.

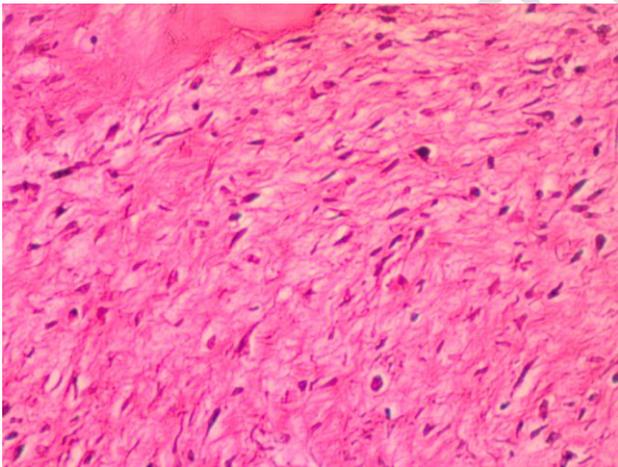
**Comment [Steve AFO20]:** Any follow up plan ?

### 2.4 Histopathology

Histopathological findings showed a huge well circumscribed mass weighing 4,200g and measuring 21x20x11cm (Figure 3). Cut section showed a greyish white appearance and gritty cut surface with a cystic lesion measuring 6x 4.5cm. Microscopy showed proliferating spindle cells that are disposed in interlacing fascicles in areas, with bland elongated nuclei and moderate eosinophilic to pale cytoplasm. Also seen are foci of hypocellular, myxoid degenerative muscle cells, thin-walled vascular channels, perivascular lymphocytes and areas of keloid-like, collagen-like bands are seen. No nuclear atypia is seen. Overall features are those of pelvic desmoid tumour. (Figure 4)



**Figure 3:** Photograph of the macroscopic finding of the tumour



**Figure 4:** Photomicrograph showing spindle cells that surround the muscle cells. These features are consistent with pelvic desmoid tumour. (Haematoxylin and eosin stain, X100)

### 3. DISCUSSION

Pelvic desmoid tumour is a rare mesenchymal neoplasm caused by abnormal proliferation of fibroblasts. It is generally cytologically benign and it arises from the abdominal muscle wall in postpartum women in scars due to trauma or abdominal surgery [8,9,10]. Although the aetiology is not known, the tumour is usually associated to family history, previous surgery or trauma and hormonal influence. The reported index case had no previous history of abdominal surgery or family history. Desmoid tumours are 3 times commoner in women and occurs mostly between 25 and 35 years of age with peak age of 36-42 years [8,9,10]. This was consistent with our sporadic case who was a female and aged 44 years. Desmoid tumours are commonly arise in the anterior abdominal wall as found in the reported case. These tumours although infiltrating into the surrounding muscular and aponeurotic structures, the overlying skin is usually spared as we have seen in this index case.

Comment [Steve AF021]: replace with 'with'

Comment [Steve AF022]: more common

Comment [Steve AF023]: space 35 years

Comment [Steve AF024]: space

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The natural history of intra-abdominal desmoid tumours range from asymptomatic to compressive pressure symptoms in the visceral organs like intestine, bladder, ureter or nerves, which could be the initial manifestation of this condition [8,9]. The reported index case had no pressure symptoms aside abdominal swelling with mild lower abdominal discomfort

Leiomyoma uteri is the commonest benign tumour of the female genital tract including the uterine body [11]. This perhaps makes it the first diagnostic consideration the clinician made when evaluating pelvic masses in young female adults. Its presentation varies; some studies have shown that as much as 39.1% of women with uterine fibroid present with only abdominal swelling the way our patient presented [12]. Peak age of incidence is between 30 and 40 years which compared with our patient's age at presentation [13].

Radiological investigation like Computed Tomography scan is usually used for the diagnosis but could be misleading at times [8]. This is evident in the reported case.

Comment [Steve AF026]: CT scan is not the first radiological investigation of choice for uterine fibroids? why did you do a CT

Surgical intervention involves the complete wide excision of the tumour which was done in the index case.

Histology of the biopsied excised tumour usually provides definitive diagnosis as in the reported sporadic case.

### 4. CONCLUSION

Pelvic desmoid tumour should be considered as a close differential diagnosis in pre-menopausal women who present with abdominal swelling. Relevant clinical history, radiological imaging and histopathological assessment are essential in making prompt accurate diagnosis.

Comment [Steve AF027]: kindly remove...it is not a close differential but it is a differential

### CONSENT

All authors declared that written informed institutional consent was obtained from the patient.

## **ETHICAL APPROVAL**

This is not applicable

## **REFERENCES**

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