

# Degeneration of a fibroid: A challenging diagnosis – Case report

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## Abstract

Uterine fibroids are the most common solid tumours found in the uterus. Prevalence varies significantly and research shows that women with African ancestry have a greater risk for these. Though the majority of cases are asymptomatic and therefore require conservative or no treatment, in some cases, fibroids can be troublesome and undergo complications that have a significant impact on patients' lives. These include degeneration of fibroids, often a misdiagnosis best detected on a Magnetic Resonance Imaging scan.

Here we present a case of red/haemorrhagic degeneration occurring in a young 23 year old nulliparous women with a small fibroid.

**Key words:** fibroid, degeneration, diagnosis

## Introduction

Uterine fibroids are hormone dependent benign tumours affecting women of African ancestry two to 3 times more than their white counterparts (1). They are oestrogen dependent and therefore have a tendency to become less significant and bothersome after the menopause (2). They can vary in their size, location and in their clinical manifestation and associated complications.

One recognised complication of fibroids is red degeneration. These are usually associated with large size fibroids and pregnancy. Very few cases, if any, are reported in non pregnant women with small size fibroids. This case report describes the case of an uncommon presentation of red degeneration of a fibroid highlighting the diagnostic challenge faced by the clinicians.

## Case

A 23 year old nulliparous women presented to the emergency department with an acute onset of severe suprapubic and groin pain, pyrexia of 39.2°C and an episode of Intermenstrual bleeding on a background history of a known fibroid measuring 1cm, two years earlier, on a pelvic ultrasound scan. She had similar presentations in the last 2 years, where she had one episode of severe abdominal pain each year and was discharged with no cause. The pain subsided with analgesia after a week each time.

She reported to have a regular menstrual cycle. Past medical history was significant for moderate eczema and an egg allergy only.

This particular admission was the 4th visit to the ED department with severe abdominal pain in the previous five weeks. She underwent a CT abdomen/pelvis which showed a ?cystic fibroid on a recent admission. Urinalysis was unremarkable for infection and blood investigations showed normal inflammatory markers and acute appendicitis was excluded (raised LDH, blood ++ urinalysis). Each time she was discharged with analgesia and no formal diagnosis and a plan for an MRI pelvis to be performed.

A further flare of the abdominal pain resulted in an admission to the gynaecology ward where an MRI was performed and showed the following:

“ 2.9x3.1x3.1cm well demarcated rounded lesion within the posterior uterine wall. Appearance favouring fibroid with red/haemorrhagic degeneration“.

It was decided that medical management was the most appropriate in this case and although she continues to have ongoing suprapubic pain, her symptoms are better where she is able to continue with her daily life and is controlled with diclofenac suppositories and codyramol 2-3 times a day with a view to having a laparoscopy in the near future.

## Discussion

Leiomyoma Uteri, more commonly referred to as fibroids, are the most common tumours found in the uterus (1). These smooth muscle tumours can be found at different layers of the uterine walls. In a systematic review, both the incidence (217-3745 per 100,000 ) and prevalence seems to vary considerably ranging from 4.5-68.6% depending on the study population sampled and the method of diagnosis used. Several studies have shown a preponderance for uterine fibroids in the black races (3). The exact cause for uterine fibroids remains unknown however risk factors include age, race, perimenopausal state, hypertension and a family history of fibroids.

Symptoms of fibroids include abnormal uterine bleeding, pelvic pressure pain, menorrhagia, dyspareunia, constipation and urinary frequency and infertility (1). A large number of cases however are asymptomatic (4).

Fibroids can degenerate or rarely undergo malignant transformation (Leiomyosarcomas) and account for 1% of all uterine malignancies (5).

The prevalence of degeneration of fibroids is reported to be 3% (6). They are more likely to be seen in pregnancy and tend to occur in the later stages and are usually seen when the fibroids are large in size.

They occur when fibroids increase in size and then outgrow their blood supply, causing a hypoxic injury and ultimately leading to necrosis and release of prostaglandins causing significant pain (6).

The preferred method of diagnosing fibroids would initially be ultrasonography (1). followed by Magnetic Resonance Imaging for more complex fibroids and pelvic masses.

Degeneration of fibroids can be divided into the following 4 groups, hyaline (most common accounting for 60%), cystic (4%), calcific and red/haemorrhagic, commonly seen in pregnancy (6).

Management of degeneration depends on the symptoms, age, parity and desire to preserve fertility. The majority of cases are managed conservatively as pain tends to subside after 2-4 weeks (6). A smaller proportion of patients in whom the symptoms are not controlled adequately with conservative management may require surgical intervention such as myomectomy, uterine artery embolization or a hysterectomy, the only cure for fibroids (7).

What makes this case unique is that this patient was not pregnant and presented with what would otherwise be considered as a small fibroid, not large enough to degenerate. Therefore the index of suspicion of this diagnosis was low to begin with. Although other acute causes of severe abdominal pain were excluded on each attendance, she was discharged multiple times with analgesia and no diagnosis until she was finally admitted to the gynaecology ward and had an MRI scan.

Unfortunately, this resulted in immense stress, anxiety and significant reduction in her quality of life.

## Conclusion

This case highlights that unusual presentation of degenerating fibroids do exist and are often misdiagnosed. Therefore, clinicians should be mindful of this diagnosis when more common causes have been excluded. Earlier suspicion of this diagnosis would have led to a reduction in emergency department admissions and a management plan being formed much sooner, reducing the impact on the patient's physical and mental health.

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