Adenomyosis

This article was written in December 2023.

Adenomyosis was brought into the spotlight in 2023 following the BBC presenter, Naga Munchetty, delivering a frank, personal account of experiencing the condition to the Women and Equalities Committee. Her testament implies a lack of knowledge among doctors about adenomyosis, delays in diagnosis and reluctance to give effective treatment (UK Parliament: Committees – 18 October 2023, women's reproductive health, oral evidence).

There are no UK guidelines on the diagnosis and management of adenomyosis so we have used a Society of Obstetricians and Gynaecologists of Canada clinical practice guideline to summarise this condition (J Obstet Gynaecol Can 2023;45(6):417). Other sources are referenced where used.

What is adenomyosis?

Nature and background

- Adenomyosis is a benign gynaecological condition characterised by the presence of endometrial glandular and stromal tissue within the myometrium, with surrounding reactive myometrial hyperplasia.
- Historically, adenomyosis was a diagnosis made on histological examination of the uterus following hysterectomy. It was therefore thought to be primarily a disease of reproductively-older women with heavy painful bleeding.
- However, improvements in imaging techniques mean it can now be identified on pelvic ultrasound scan, and it is often identified in younger women as well as older ones.

(J Obstet Gynaecol Can 2023;45(6):417)

Pathogenesis

Adenomyosis is poorly understood, but putative theories regarding the pathophysiology of adenomyosis include:

- Chronic myometrial contractions causing microtrauma to the endometrial/myometrial interface, which leads to inflammatory processes and gives rise to invagination and migration of the basal endometrium into the myometrium.
- Metaplasia of stem cells within the myometrium developing into endometrial tissue foci.
- 'Retrograde menstruation' whereby ectopic endometrial cells pass into the pelvis and infiltrate the myometrium from the outside, creating endometrial deposits.

Adenomyosis is not considered to be a form of endometriosis due to differing pathogenic pathways and clinical presentation – although the conditions overlap in some characteristics, and can co-exist.

(https://doi.org/10.12688/f1000research.17242.1)

Symptoms

Between 21 and 34% of women of reproductive age have adenomyosis identified on USS, but, of those, **30% are asymptomatic.**

The presence of adenomyosis is associated with:

- Dysmenorrhoea.
- Dyspareunia.
- Chronic pelvic pain.
- Abnormal uterine bleeding.
- Infertility.
- Adverse pregnancy outcomes.

Pelvic pain and heavy bleeding are the commonest symptoms, but adenomyosis may co-exist with other gynaecological conditions, which may also contribute to a woman's overall clinical experience (e.g. fibroids, endometriosis).

(J Obstet Gynaecol Can 2023;45(6):417)

Diagnosis of adenomyosis

There are no standardised criteria with which to definitively diagnose adenomyosis, but there are radiological features which are highly suggestive.

- Transvaginal ultrasound (TVS) should be the first-line investigation of patients presenting with symptoms suggestive of adenomyosis.
- TVS has a sensitivity and specificity of around 80% for adenomyosis.
- Typical ultrasonic features include an enlarged globular uterus, asymmetrical myometrial thickening and myometrial cysts.

MRI is less sensitive for diagnosis of adenomyosis, but may be used in secondary care second line if TVS findings are inconclusive, other pathology is suspected or surgery is planned.

(J Obstet Gynaecol Can 2023;45(6):417)

Management

Management should be symptom-oriented; asymptomatic adenomyosis does not require any treatment.

- There are no specifically licensed treatments for adenomyosis.
- We should offer non-hormonal and hormonal options to manage symptoms of abnormal bleeding and pelvic pain.
- Definitive treatment of symptomatic adenomyosis is hysterectomy, but this is not a practical option for those who wish to retain their fertility or do not wish to have major surgery.

Treatment options

Treatment option	Supportive evidence
NSAIDs and tranexamic acid.	**Both used to reduce heavy bleeding:** not specifically studied in patients with adenomyosis. NSAIDs can help alleviate **dysmenorrhoea.**
Progestogens: • Levonorgestrel IUS. • Oral progestogens (medroxyprogesterone acetate, norethisterone or the progestogen-only pill). • Subdermal implant. • Depo-provera.	Progestogens induce endometrial atrophy, and all progestogenic formulations may **reduce heavy menstrual bleeding and dysmenorrhoea.** There is some data to suggest efficacy in symptomatic adenomyosis with the IUS, oral dienogest and norethisterone: • Of all the progestogens, the IUS has been studied most in women with adenomyosis, and shows favourable results when compared with surgery and the combined pill. • The best-studied oral progestogen for adenomyosis pain is dienogest, but this is currently only licensed for endometriosis in the UK. • Norethisterone has been shown to be effective in a long-cycle regimen.
Combined hormonal contraception: • Continuous or extended regimens may be more effective than traditional regimens.	CHC also induces endometrial atrophy, and is a common treatment for **abnormal bleeding and dysmenorrhoea.** Data suggests it is not as effective as the IUS or dienogest, but does reduce symptoms of adenomyosis.
GnRH analogues and antagonists.	These agents induce a hypogonadotrophic state and hence **inhibit the menstrual cycle**. There little data examining the role of GnRH analogues in managing adenomyosis symptoms, but they appear to be beneficial. GnRH antagonists are used in the management of fibroids and endometriosis, and case reports suggest efficacy in adenomyosis. These are considered second-line medical treatments, and long-term usage requires add-back HRT.
Uterine artery embolisation.	Evidence is supportive in the management of adenomyosis in women who have completed childbearing.
Surgery, e.g. hysterectomy.	**Hysterectomy represents a definitive solution to adenomyosis**, yet data regarding quality of life following surgery is lacking. Hysterectomy may be offered if a symptomatic patient has had failure of conservative management and consents to major surgery.

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When to refer

Refer to gynaecology if any of the following:

- First-line hormonal or non-hormonal management is inadequate.
- There are any other worrying features suggestive of another pathology which need further investigation (e.g. intermenstrual or postcoital bleeding).
- There are additional worries or the patient requires specialist advice (e.g. fertility issues).

(BJGP, 2023; 73: 524)

Adenomyosis and fertility

- Adenomyosis is associated with infertility and adverse reproductive outcomes such as miscarriage. However, there is insufficient data to conclude that the relationship is causative.
- Around 10% of women with subfertility have isolated adenomyosis and no other cause for their subfertility (Ultrasound Obstet Gynecol 2023; 62(1): 23).
- Studies looking at outcomes in women with adenomyosis undergoing fertility treatment have shown increased rates of miscarriage and reduced live birth rates.

(J Obstet Gynaecol Can 2023;45(6):417)

	**Adenomyosis** • Adenomyosis is a benign gynaecological condition characterised by the presence of endometrial tissue within the myometrium, and it can be identified on pelvic ultrasound scan. • Adenomyosis is not considered to be a form of endometriosis due to differing pathogenic pathways and clinical presentation – although the conditions can co-exist. • Around 30% of women of reproductive age have adenomyosis identified on USS, but, of those, 30% are asymptomatic. • The commonest symptoms of adenomyosis are abnormal uterine bleeding and dysmenorrhoea. • First-line management of symptomatic adenomyosis is with non-hormonal and hormonal preparations. • Adenomyosis is associated with subfertility, but there is no evidence that it is a causative relationship.