Endometriosis: the spectrum of MRI findings. A pictorial review.
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Background
- Endometriosis is a common condition, and describes the finding of functional ectopic endometrium outside of the uterine cavity.
- It affects a huge number of women worldwide: 10% women of childbearing age have endometriosis, and up to 30% of women presenting with infertility. [1]
- It has a spectrum of presentation and findings: endometriosis can be asymptomatic, or present with cyclical pelvic pain, dysmenorrhea, dyspareunia and infertility. Symptoms depend on extent and location of endometrial deposits.
- Deep pelvic endometriosis is strongly linked to pelvic pain and infertility.
- Appreciating the MRI findings and distribution, potential complications, and MRI stage can help guide management options and improve symptom burden. [1][2]

MRI Protocol
Standard MRI Sequences in our institution:
- All patients should receive 20 mg of IV 'Bucopan' or equivalent.
- Large field of view axial T1.
- Sagittal T2.
- Axial oblique T2 perpendicular to any rectovaginal lesion.
- Coronal oblique T2 perpendicular to any rectovaginal lesion.
- T1 FAT SAT axial oblique and sagittal imaging.

Adenomyosis
- Adenomyosis is also known as endometriosis interna and represents diffuse (Fig 1) or focal (Fig 2) ectopic endometrial tissue deposits within the uterine myometrium.
- It is of low signal intensity on all sequences. Variable foci of high T2 signal can be seen also, which represent ectopic glandular endometrium or haemorrhagic foci.
- Widening of the junctional zone of over 12mm (Fig 1 arrow) is seen.

Endometrioma
- The presence of high T1 signal and T2 signal less than fluid within a cyst is highly specific for cystic endometriosis (endometriomas or "chocolate cysts"). (Fig 8).
- The appearance of "shading" on T2W is due to presence old blood products containing iron and protein. (Fig 7 & 9).

Conclusion: Endometriosis is common, yet can cause huge morbidity. Appreciating its varied presentations can have significant impact on patient’s symptoms and management.

References: