

Different locations of endometriosis in 86 patients: a single-centre study.

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Aims and objectives

Endometriosis is an important gynecologic disorder defined as the presence of functional endometrial glands and stroma outside the uterine cavity. Prevalence of endometriosis is 6-10% in the general population, but rises to 35-50% in women with pelvic pain or infertility or both.

Mean age at diagnosis is 25-29 years, but it is often greater in women who complain infertility rather than pelvic pain [1-3]. It mainly occurs within the pelvis but unusual extrapelvic sites have also been reported. The most common extra-pelvic site of involvement is abdominal wall; it commonly develops after surgical operation, as caesarean section, hysterectomy, or laparoscopy [4, 5].

Most of the patients are asymptomatic and diagnosis is incidental; others mainly complain the presence of a small tender abdominal or pelvic wall mass associated with a previous surgical incision site. US is usually the first imaging examination performed to evaluate the site, extent and nature of endometriosis. CT has a high diagnostic accuracy in the evaluation of endometriotic lesions, though it is not routinely performed to avoid radiation exposure in fertile patients. Finally, MR is more and more performed in patients with chronic pelvic pain, because it provides better contrast resolution than CT and US and is superior to CT for depicting endometriotic lesions, their infiltration of near structures and the presence of haemorrhage associated with endometriotic lesions. The aim of this study was to retrospectively review the different locations of pelvic and extrapelvic endometriosis occurred in our Department during last 3 years.

Methods and materials

A retrospective analysis of reports of all US, CT and MR examinations containing the term "endometriosis" performed from November 2011 to November 2014 in our Section of Radiology of the DIBIMEF of the University Hospital "Paolo Giaccone" of Palermo. Data on patients, on the location and on the different forms of endometriosis, were collected.

Results

55 MR, 15 CT and 22 US exams belonging to 86 patients (mean age $35,90 \pm 9,49$ years) were reviewed. Considering location, endometriosis occurred in the ovaries in 64 patients, uterus or parametrium in 17/86 patients, intestine (ileocecal, colonic or sigmoid-rectal) in 13/86, abdominal wall in 13/86, rectovaginal septum in 9 patients, urinary bladder in 6/86, ureters in 5/86, vesicouterine pouch in 1 patient, urachal remnant in 1/86

and kidney in 1/86 (Figure 1). In 21/86 patients, endometriosis was present in more than one location (Table 1, Figure 2). In 37/86 patients there were endometriotic nodules and/or adhesion while cysts occurred in 47/86 patients.

Images for this section:

	bladder	uterus	vesico-uterine pouch	rectovaginal septum	ovaries	sigmoid-rectal intestine	ileocecal	III lower descending colon	urachal remnant	abdominal wall	ureters	
1	x			x	x	x		x	x			
2	x	x	x		x	x				x		
3		x		x		x				x		
4		x		x		x						
5		x		x	x	x						
6		x			x							
7				x	x						x	
8					x	x	x					
9	x	x			x	x						
10		x			x	x						
11				x	x	x						
12		x			x	x	x					
13		x+cervix									x	
14		x+cervix			x							
15		x			x	x						
16	x										x	
17	x				x	x						
18		x									x	
19		x		x	x	x						
20		x				x					x	
21	x				x							
	6	12	1	7	15	12	2		1	1	2	5

Table 1: Table 1. Different locations in patients with endometriosis in more than one site.



Fig. 1: Figure 1. Abdominal CT performed before and after intravenous administration of 80 ml of iopromide (Ultravist 370) in a 37-year-old female with a history of previous surgery of a cyst endometriosis in the left ovary, shows renal endometriosis. The tissue is in the left kidney and shows an inhomogeneous density, for the presence of spontaneously hyperdense multiple (figure 1-A) contiguous masses, with a "bunch of grapes" appearance. This tissue shows a really low enhancement after contrast medium injection either in arterial phase (figure 1-B) or in nephrographic phase (figure 1-C) of the study.

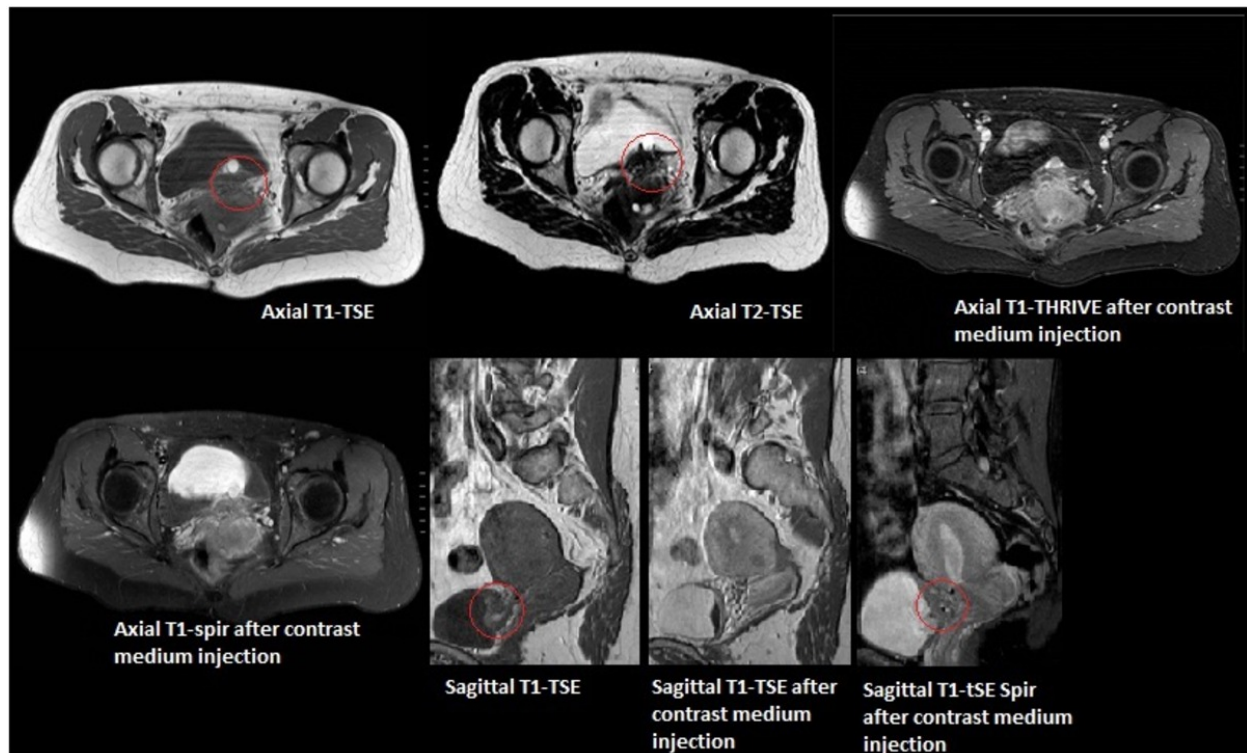


Fig. 2: Pelvic MR performed in a 41-year-old female with a history of caesarean section in a 1,5 Tesla MR before and after intravenous injection of 6 mL of Gadobenate-dimeglumine(Gd-BOPTA). The exam shows endometrial tissue disposed between the uterus, vagina and bladder, with invasion of the latter , and involvement of the distal tract of the left ureter. This tissue shows inhomogeneous signal intensity, medium-low with hyper-intense areas on T1 weighted sequences, low on T2 weighted sequences with hyper intense areas and moderately enhances after contrast medium injection. Furthermore, this tissue adheres to anterior walls of the cervix and vagina, infiltrates the posterior wall of the bladder, protruding in its lumen, and involves the distal tract of left ureter.

Conclusion

Endometriosis is the result of functional endometrium located outside the uterus. Though there are many theories which try to explain its cytogenesis, none of them justified the origin of the different forms of this disease. To date, the most widely accepted theory is that endometriosis results from metastatic implantation from retrograde menstruation. This theory assumes transportation of endometrial tissue from the uterus in a retrograde fashion into the peritoneum and its implantation on serosal surfaces outside the uterus. The most common sites of implantation are ovaries, anterior and posterior cul-de-sac, uterosacral ligaments, posterior broad ligaments, uterus, fallopian tubes, sigmoid colon, ureter and small intestine. However, despite the rarity of extrapelvic endometriosis, several cases of endometriosis of the gastrointestinal tract, the urinary tract, as well as abdominal scars loci can occur as demonstrated in our retrospective evaluation and must be kept in mind, mainly in patients with history of endometriosis because an early diagnosis is mandatory to treat the disease as soon as possible.

Personal information

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