Common causes of low abdominal (pelvic) pain in women of reproductive age

This table is intended as a guide to assist with the diagnosis of a new onset of low abdominal (pelvic) pain among women of reproductive age but is not an exhaustive list. Note that concurrent diagnoses are common and may result in mixed signs and symptoms. Fever and raised WCC may be present among women presenting with acute pelvic pain from any cause, however these signs are non-specific and their presence or absence does not necessarily support or exclude a specific diagnosis.

Differential diagnosis	Typical presentation	Findings that support the diagnosis	Definitive diagnostic findings
Medical emergencies			
Ectopic Pregnancy	• Pelvic pain and/or bleeding in the first trimester (typically 6 to 8 weeks) • Pain may localize to one side	• Positive pregnancy test	Ectopic pregnancy identified on imaging and/or laparoscopy
Appendicitis	• Acute onset (hours to days) • Migration of pain from peri umbilicus to RIF • Systemic symptoms present: anorexia, nausea, vomiting	• Migration of pain from umbilicus to right iliac fossa • Onset of pain not associated with menses • McBurney's point site of maximal tenderness	Appendicitis confirmed on imaging, laparoscopic and/or histological findings
Ovarian cyst complications (rupture /torsion)	• Sudden onset of unilateral pelvic pain, more common in the right iliac fossa • May be associated with vaginal bleeding	• Adnexal mass felt on bimanual examination	Ruptured ovarian cyst identified on imaging and/or laparoscopy
Other causes			
PID [1]	Typical pain: • Onset days to weeks and typically starts at the time of disruption of	• Age 15 to 30 • Onset of pain typically occurs at the time of disruption of blood vessels [2]	Endometritis / Salpingitis andor tubo-ovarian abscess identified at laparoscopy and/or on histology

	blood vessels [2] • Similar to period pain in character and distribution – initially bilateral but may localise to right or left iliac fossa • Deep dyspareunia • Pain may refer to RUQ [3] • Abnormal or inter-menstrual bleeding and/or vaginal discharge may be present	• No migration of pain from periumbilicus • Pain on moving the cervix • Rapid response to appropriate antibiotic treatment (within 7 days) Other findings that support the diagnosis but their absence does not exclude PID • Chlamydia, gonorrhoea or M. Genitalium detected [4] • Muco-purulent cervical discharge on examination • Recent diagnosis of chlamydia, gonorrhoea or urethritis in the woman or a sexual partner • New partner in the last 6 months	Causative organism(s) identified from pelvic fluid or endometrial samples
UTI **Pyelonephritis**	• Dysuria, frequency +/- suprapubic pain • Pain ascends unilaterally from the suprapubic area through the iliac fossa to the renal angle • Systemic symptoms may be present	• Dysuria, frequency and /or positive nitrites on urinalysis* **Beware not to over diagnose UTI based on urinary dip as this may be positive in the presence of PID* • Renal angle tenderness	Causative organism identified on urine culture

Other common causes of physiological or chronic pelvic pain that may be concurrent or need to be excluded			
Endometriosis	• Dysmenorrhoea • Pelvic pain similar in character and distribution to period pain but not confined to the first few days of menses • Deep dyspareunia • Bowel symptoms may be present • Typical chronic rather than an acute onset • Cyclical nature	• Pain does not respond to PID antibiotic treatment	Endometriosis identified by laparoscopic and/or histological findings
Mittleschmerz / Mid Cycle / Ovulation pain	• Typically mild unilateral iliac fossa pain last a few hours to a few days	• Mid cycle of a regular menstrual cycle	
Physiological period pain	• Typically bilateral pelvic pain, onset with menstruation • Pain may refer to lower back /upper thighs	• Onset at the time of menstruation, last 1-2 days only	

Footnotes

[1] Pelvic Inflammatory Disease (PID) encompasses endometritis, salpingitis, tubo-ovarian abscess. Among pregnant women PID may present as pain and /or bleeding in 1st trimester (threatened or complete miscarriage) or post-partum (endometritis)

[2] Menstruation, following rupture of membranes or instrumentation of the genital tract (e.g. TOP/ IUCD insertion)

[3] Fitz Hugh Curtis syndrome

[4] It is a sexually transmitted condition although for various reasons no causative organism is detected in up to 70% of cases of PID