1. Surgical
Acute cholecystitis
Perforated peptic ulcer
Intestinal obstruction
Pancreatitis
Intussusception
Mesenteric adenitis
Meckel's diverticulitis
Colonic/appendicular diverticulitis
Rectus sheath hematoma
2. Urological
Right ureteric colic
Urinary tract infection
Right pyelonephritis
3. Gynaecological
Ectopic pregnancy
Salpingitis/pelvic inflammatory disease
Ruptured ovarian follicle
Torsion of ovarian cyst
4. Medical
Pneumonia
Gastroenteritis
Diabetic ketoacidosis
Terminal ileitis
Porphyria
Preherpetic pain on the right 10^{th} and 11^{th} dorsal nerves

Appendix 1: Differential diagnosis of acute appendicitis.

Retrocaecal/Retrocolic (75%)
Right loin pain is often present with tenderness on examination.
Muscular rigidity and tenderness to deep palpation are often absent due to protection from the overlying caecum.
The psoas muscle may be irritated in this position leading to hip flexion and exacerbation of the pain on hip extension (psoas stretch sign).
Subcaecal and Pelvic appendix (20%)
Suprapubic pain and urinary frequency may predominate.
Diarrhea may be present due to irritation of the rectum.

Abdominal tenderness may be lacking but rectal or vaginal tenderness may be present on the right. Microscopic hematuria and leucocytes may be present on urinalysis.
Pre and Post-ileal (5%)
Signs and symptoms may be lacking.
Vomiting may be more prominent and diarrhoea due to irritation of the distal ileum.

Appendix 2: Anatomical position of the appendix and possible changes in clinical presentation.

General Examination	
Flushed, a fetor oris, in pain, lie still, low grade fever and tachycardia	
Abdominal Examination **Signs of localized/ generalized peritoneal irritation**	
Dunphy's sign	Increased pain in the right lower quadrant with coughing
Hip flexion sign	Patient maintains hip flexion with knees drawn up for comfort
Other peritoneal signs	Rebound tenderness, hyperesthesia of the skin in the right lower quadrant
Positive Hopping Test	Increased pain in the right lower quadrant with hopping
Positive Rebound Tenderness in McBurney's Point	Positive localized rebound tenderness on right lower quadrant and muscular guarding and Muscular Rigidity.
Positive Percussion Tenderness	Localized tenderness over percussion site at McBurney's point
Normal Rectal or Vaginal examination	RIF pain on rectal/ vaginal examination may indicate a pelvic appendix
Positive Rovsing's Sign	RIF Pain on palpation left iliac fossa
Positive Psoas's Sign	Pain on hyperextension of right thigh in lateral decubitus position (retroperitoneal retrocecal appendix) Pain thigh lifting against resistant in supine position (retroperitoneal retrocecal appendix)
Positive Obturator's Sign	Pain on internal rotation of right thigh (pelvic appendix)

Appendix 3: Complete examination of suspected cases of appendicitis.