**Case report:**

**Appendiceal endometriosis: A Rare Case Report**

Dr. Swaroop N Shashidhar, Dr. Kishan Prasad HL, Dr. Lancelot Lobo, Dr. Jaya K S Hegde Medical Academy  
Corresponding author: Dr. Swaroop N Shashidhar

**Abstract**

Appendix is a relatively small anatomic compartment with the diversity of pathologic processes that may arise from it. Appendicitis is the most common entity in appendix. Appendiceal endometriosis is rare, but it can occur. Here, we are presenting a case of a 29 year female presented with recurrent abdominal pain with increasing total leucocyte count. Ultrasound abdomen and pelvis showed acute appendicitis and ovarian cyst. Emergency appendicectomy was performed which confirmed on histopathology as appendiceal endometriosis.

Key words: appendix, endometriosis, appendicitis, infertility

**Introduction**

Endometriosis means ectopic endometrial tissue is present outside the uterine cavity.\(^1\) Patient usually presents with acute or chronic abdominal pain and infertility. Diagnosing it preoperatively is difficult. Histopathology provides the definitive diagnosis. However, laproscopy is considered choice for diagnosing and surgical treatment of endometriosis.\(^2\) Here we present the case of young female who presented with acute abdominal pain with history of recurrent abdominal pain and infertility which on histopathology was confirmed as appendiceal endometriosis.

**Case report**

A 29 year old female, who presented with acute abdominal pain, had history of recurrent abdominal pain. She was married 6 years back and was anxious to conceive. Menstrual history was unremarkable. She had no fever. Her vitals were stable. Cardiovascular system and respiratory system examination was unremarkable. Per abdomen examination showed tenderness in right iliac fossa, guarding in the lower abdomen with positive rebound tenderness. Haematological parameters showed increasing total leucocyte count. Urine pregnancy test was negative. Ultrasound suggested provisional diagnosis of acute inflammed appendix and ovarian cyst. Hence, emergency appendicectomy and cystectomy was performed.

**Histopathology**

Appendix on gross examination measured 8x1 cm with dull outer surface. Microcopically, appendix showed fibrosed wall with lymphoid hyperplasia with endometrial glands as shown in arrow.\([\text{Fig1A}]\) Muscularispropria and serosa showed endometriotic tissue with surrounding haemorrhage as shown in arrow.\([\text{Fig1B,C}]\) Focal fragments of omental tissue with reactive mesothelial proliferation were also noted as shown in arrow.\([\text{Fig1D}]\)

Ovarian cystectomy specimen measured 3x2 cm and microscopically showed haemorrhagic cyst. Histopathological features are consistent with appendiceal endometriosis with localized peritonitis.
Discussion
Endometriosis is common in pelvic organs but its appendiceal involvement is rare. It usually presents with chronic pelvic pain, dysmenorrhea and infertility.\(^3\) Intestinal endometriosis in women are asymptomatic and are brought to clinicians notice only if there is abdominal pain or mass or intestinal obstruction.\(^4\)

Appendiceal endometriosis is seen in only 2.8% of patients with endometriosis.\(^5\) Appendiceal endometriosis presents with appendicitis, mucocele of appendix and appendicular mass mimicking neoplasm. Perforation of appendix is uncommon but can occur in 1\(^{st}\) two trimesters of pregnancy.\(^6, 7\)

In our case patient had history of recurrent lower abdominal pain associated with primary infertility but the menstrual cycles were regular. Preoperatively, appendicitis was the suspected diagnosis until endometriosis was definitively proved by histopathological examination.\(^8\) Appendiceal endometriosis patients have significant decrease in quality of life due to chronic lower abdominal pain and thus appendicectomy provides long term symptom resolution.\(^9\)

In a study of 200 consecutive endometriosis operations with routine appendicectomy, 3 cases of appendiceal endometriosis were proved by histopathological examination.\(^10\) Another study of 106 ovarian endometriosis cases with routine appendicectomy showed gross abnormality in 3.3% of cases and was microscopically proved in 13.2% of cases.\(^11\) In our patient laproscopic appendicectomy and cystectomy were performed. However, gross inspection of appendix was dull while microscopy proved appendiceal endometriosis.

In cases, where H&E stain fails to demonstrate endometrial tissue, appendiceal endometriosis can still be suspected by marked increase in number of mast cells in muscularis propria. This condition is called as catmenial appendicitis.

Reason behind the cause of infertility in endometriosis is still not known. However, laproscopy combined with medical treatment improves fertility.\(^12\) Though appendicectomy can be considered in pelvic endometriosis it is controversial.\(^10, 11\) However in cases of incidental appendicectomy preoperative counselling and consent for appendicectomy is important.\(^8\)

Thus, to look for appendiceal pathology should not be neglected in young female patient who presents with recurrent abdominal pain and infertility.

Conclusion
Appendiceal endometriosis is very rare but it can occur and mimic appendicitis. Thus, it should always be considered as one of the differential diagnosis of young woman with recurrent lower abdominal pain with history of infertility.
Fig 1A- Appendix showing fibrosed wall with lymphoid hyperplasia with endometrial glands as shown in arrow. [100X, H&E]

Fig 1B,C- Muscularis propria and serosa showing endometriotic tissue with surrounding haemorrhage as shown in arrow. [100X, H&E]

Fig 1D- Focal fragments of omental tissue with reactive mesothelial proliferation as shown in arrow. [100X, H&E]

References