Endometriosis In General Surgical Practice
R Tabbakh, M Halliday

Abstract
16 cases of endometriosis presented to general surgeons at Princess Royal Hospital, Shropshire 1994-2004.

The presentations include swellings related to Pfannanstiel scars (4 cases), umbilical nodules (4 cases), one swelling in the groin, two swellings of the abdominal wall, acute abdominal pain mimicking acute appendicitis (2 cases) and bowel obstruction (3 cases). Five patients were admitted as an emergency. Fourteen patients were premenopausal (22-53) and two underwent hysterectomy prior to their presentation. Gynecological opinion was sought in seven patients who required medical treatment and three of them required further surgical intervention by gynecologists.

INTRODUCTION
Endometriosis is defined as the presence of ectopic endometrial tissue outside the uterine cavity. It was first described by the Austrian pathologist Von Rokitanskey in 1860.

It is a common presentation in gynecology and it usually affects pelvic organs.

However, it may, rarely, present to general surgeons in terms of swellings in usual sites such as previous scars, umbilicus, and bowels or may result in surgical emergency.

The aim of this study is to describe the approach of the general surgeons to patients with endometriosis admitted to a single unit and to review the literature about its management.

RESULTS
Sixteen women with median age of 32 (22-53) years have presented to general surgeons with different symptoms in 1994-2004.

Six patients presented with wound complications; four presented with painful swellings related to Pfannenstiel incision with median period of 3-16 years after surgery. None of these cases had cyclical pattern symptoms and surgical excision was adequate.

Two patients presented with soft tissue swellings in previous incision scars.

A 30 year old patient presented with tender swelling in the right paramedian incision for perforated appendix 20 years ago. Another 32 year old female complained of intermittent cyclical pain associated with tender lump on the a lower midline incision scar Paraumbilical swellings were found in four patients, of whom two of them admitted cyclical changes of pain and bleeding discharge related to menstruation.

Finally, a 36 year female presented with right groin pain...
having been diagnosed with endometriosis 8 years ago.

Five patients were admitted with abdominal pain.

A 51 year old woman presented with colicky abdominal pain, weight loss and altered bowel habit. She underwent barium enema which showed large polyp in the midtransverse colon. Laparotomy and extended right hemicolectomy was performed and revealed two masses one in the midtransverse colon and the other in the cecum which involved the ureter, right fallopian tube and the uterine wall. Histology showed endometriosis in both masses. She was referred to the gynecologist and was treated with Danazol for three months.

A 28 year old lady known to have endometriosis, with a surgical history of hysterectomy and right salpingo-oopherectomy and adhesionlysis to the cecum and sigmoid colon, presented with small bowel obstruction. This was secondary to endometriotic adhesions and was treated with distal ileal resection. The histology result showed ileal endometriosis.

A 22 year old lady developed sudden onset of right lower quadrant acute abdominal pain with tenderness and leucocytosis (WBC 20.7). She underwent diagnostic laparoscopy which showed mild inflammation of the appendix. This was removed, and histology revealed endometriosis in the wall of the organ. She developed vaginal bleeding accompanied with dysmenorrhea and menorrhagia three months later. She had another diagnostic laparoscopy which demonstrated active endometriosis on both ovaries for which she was treated with oral contraceptive pills as she was of childbearing age.

Another 31 year old woman presented with symptoms suggestive of acute appendicitis for which she underwent open appendectomy which revealed normal appendix with a nodule involving its tip in addition to another nodule and thickening involving the distal ilium and the histology examination showed the presence of endometriosis. She was seen by the gynecologist who started her on Nothehisterone.

The last case was 53 year old lady who is known to have hysterectomy and presented with colicky abdominal pain, constipation and vomiting. She was treated conservatively. Unfortunately she was admitted again a month later with the same symptoms where she underwent laparotomy, appendectomy, terminal ilium resection and primary anastomosis and biopsy was taken from a thickening of the rectosigmoidal junction. Histology examination showed endometriosis on the tip of the appendix including the terminal ilium and it was found in the sigmoidal specimen as well. She had a barium enema post operatively which confirmed sigmoidal stricture. However, a flexible sigmoidoscopy excluded any mucosal abnormality. She was seen by a gynecologist who started her on Depo Provera for six months and followed by Zoladex injections for three months.

**DISCUSSION**

Endometriosis is observed in 4-7 % of women. It affects the pelvis most commonly and results in a range of gynecological symptoms such as pelvic pain, lower back pain, dysmenorrhoea, dyspareunia and menstrual symptoms like menorrhagia and polymenorrhoea as well as infertility.

It is rarely approached by general surgeons, where it has been reported as endometrioma nodules along surgical scars and related to the umbilicus and found related to other intra peritoneal organs such as appendix, small and large bowels.

The main theories of pathogenesis of endometriosis are transportation and metaplasia theories. The transportation theory presumes that endometrial cells are transported to distant sites during surgical manipulation or menstrual shedding via Fallopian tubes into the peritoneal cavity. The metaplasia theory assumes that embryonic coelomic mesothelium dedifferentiates into endometrial tissue under a stimulus such as inflammation or trauma.

Intestinal endometriosis occurs in 37% of patients with endometriosis. The sites of occurrence in descending order of frequency are rectosigmoid, small intestine, cecum, and appendix. The disease commonly affects the serosa of the bowel but, usually, does not involve the mucosa. Therefore, most of cases are asymptomatic due to the superficial involvement of the disease.

Large bowel endometriosis may present with cyclical per rectal bleeding, partial obstruction or abdominal pain.

Rupture of an endometriotic cyst presents an acute abdominal emergency where it should be differentiated from ruptured ectopic pregnancy or other cause of acute abdomen.

In our series three patients presented with symptoms suggestive of acute appendicitis and the histology subsequently showed endometriosis. Two other patients presented within an emergency situation of intestinal bowel obstruction due to endometriotic adhesions which needed bowel resection and anastomosis. The last patient underwent
laparotomy and hemicolectomy to treat large bowel polyps which turned out to be endometriotic. All the previous patients have had gynecological opinion and treatment.

Gastrointestinal contrast studies and colonoscopy are rarely useful in diagnosing GI endometriosis because the disease usually doesn't penetrate all the way through the bowel, but remains in the muscular wall of the bowel.

Bowel resection is indicated in complicated cases.

Treatment of endometriosis should be individualized according to the needs of every patient. Hormonal treatment is the most common medical treatment for younger patients with milder disease. Combined contraceptives can be prescribed to suppress the growth of endometriotic patches. Danazol (steroid androgen) can be used as a second line treatment. GnRH agonists (Zoladex) does not cause acne or weight gain.

In older patients diagnostic laparoscopy can be utilized to confirm the diagnosis and ablate endometriotic lesions by laser vaporization or excision as well as division of intestinal and pelvic adhesions.

Hysterectomy and bilateral oopherectomy are treatment options for patients with intractable pain.

CONCLUSION
Endometriosis is an occasional diagnosis in general surgery. However it should be born in mind, whenever operating on women of childbearing age for acute abdominal pain.

Excision of the area involved with endometriosis will usually often be sufficient treatment, but gynecological review in clinic is recommended.

ACKNOWLEDGEMENTS
The authors thank the consultant surgeons of the Princess royal Hospital, Telford, for permission to report on their patients.

CORRESPONDENCE TO
Mr. R. Tabbakh Trust Grade Registrar Kettering General Hospital Rothwell Road Kettering Northants NN16 8UZ UK
Tel: 00447810441380 ramitabbakh@hotmail.com

Mr. M Halliday Consultant Surgeon, Princess Royal Hospital, Apley Castle, Telford, Shropshire, TF1 6TF. UK
Tel: 01952 641222#4431 Fax: 01952 242218
mhalliday@boltblue.com

References
Author Information

R. Tabbakh
General Surgical Department, The Princess Royal Hospital

M. Halliday
General Surgical Department, The Princess Royal Hospital