Endometriosis associated with ureteric obstruction

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Summary

Endometriosis and its complications are not uncommon in Malaysian women. Two cases of ureteric obstruction due to endometriosis are reported and the literature on ureteric obstruction and endometriosis reviewed. It is emphasized that the possibility of ureteric obstruction must be suspected when there is extensive endometriotic disease or if the patient presents with loin pain or pain on one side of the abdomen. Ultrasound scan of the kidneys and, if necessary, an intravenous pyelogram will have to be done on the slightest suspicion. Patients with endometriosis will have to be followed up until the menopause or even later if they are on hormone replacement therapy.

Introduction

Most textbooks claim that endometriosis is found in ten to twenty per cent[1] of women undergoing laparotomy in the United Kingdom and the United States of America but that it is rare in the Asian population[1] . Those of us who have practised Obstetrics and Gynaecology for several years in this country do know that this is a myth as we see the ravages caused by this condition in a large proportion of our gynaecological patients. This is possibly due to the present tendency of postponement of marriage to later years and, also, to the practice of birth control which decreases the frequency of child bearing. Although endometriosis is not a malignant condition, it is often a progressive disease and does lead to considerable morbidity and can even led to permanent damage, e.g. of the kidneys, as demonstrated by the two cases that are reported. In patients (similar to those reported) who have completed their families, the treatment is relatively simple as radical surgery can be carried out and a complete cure can be obtained. Younger patients, especially those desiring children, present an entirely different problem. In such patients, medical treatment, conservative surgery, or both has to be carried out. Fifty to sixty per cent[1] respond to these modalities of treatment whereby the disease is controlled, symptoms are relieved and they even succeed in having the children that they desire. In others, the disease tends to be progressive and distressing and sometimes even complications like rupture or infection of endometriomas may arise which may necessitate urgent radical surgery.

About one per cent of patients with endometriosis develop complications of the genito-urinary tract[4] . The most common complication is implants of endometriotic tissue in the bladder wall. Implication of the ureters with periureteric scarring extrinsically or actual intrinsic invasion of the ureteric wall by endometriosis leading to ureteric obstruction is extremely rare[2] . Lucero et al.[2] reviewed the literature and found ninety-eight cases in English and five in Japanese. They added three further cases. Kane et al.[3] reviewed cases of endometriosis in two Ottawa Teaching Hospitals during the years 1979 to 1983 and found obstuctive uropathy in seven patients. I report herewith two patients whom I treated recently.

Case Reports

Case 1

A Chinese Female aged forty-one years, Para Five was first seen by me in May 1988 with a missed abortion of eight weeks and a mass posterior and left of the uterus about 6 cm. in diameter which had been diagnosed by ultrasound scan as probably endometriotic in origin. A curettage was done and necrotic products of conception were evacuated. The curettage was immediately followed with a laparotomy and it was confirmed that she had an endometriotic cyst of the left ovary adherent to the uterus, the lateral pelvic wall, very near the ureter, and to the sigmoid colon. There were no other foci of endometriosis elsewhere in the pelvis. The adhesions were separated, the ureter was identified and a left salpingo-oophorectomy was done. As she was keen on sterilisation, the right tube was ligated by Pomeroy's method and an appendicectomy was done at the same time. Histopathology confirmed a benign endometriotic cyst of the ovary. She was not given any medical treatment as the excision of the cyst was complete. She was reviewed in March 1989, and a hard mass was felt in the right fornix. A provisional diagnosis of recurrence of endometriosis was made and an ultrasound scan was done which showed two large cysts; one in the Pouch of Douglas measuring 77 mm., and the other in the right adnexa measuring 34 x 49 mm. She refused another laparotomy and was, therefore, started on Depot Medroxyprogesterone Acetate and oral Norethisterone to suppress her menses. On review in November 1989, no adnexal masses were felt. In April 1990, she was referred by her physician because of right paraumbilical and right loin pain. Examination showed a mass in the right fornix and an intravenous pyelogram showed marked hydroureter and hydronephrosis on the right side due to obstruction by the cyst. The left side was quite normal (Figure 1). On laparotomy, there were adhesions of the gut to the uterus associated with a large right ovarian cyst which was also adherent to the uterus and to the lateral pelvic wall. Adhesions were separated and the ureter was dissected throughout its pelvic course (Figure 2). Total hysterectomy and right salpingo-oophorectomy was done. The patient was subsequently symptom-free. She was started on hormone replacement treatment in September 1990 but she refused to have a further pyelogram although an ultrasound scan showed normal kidneys.

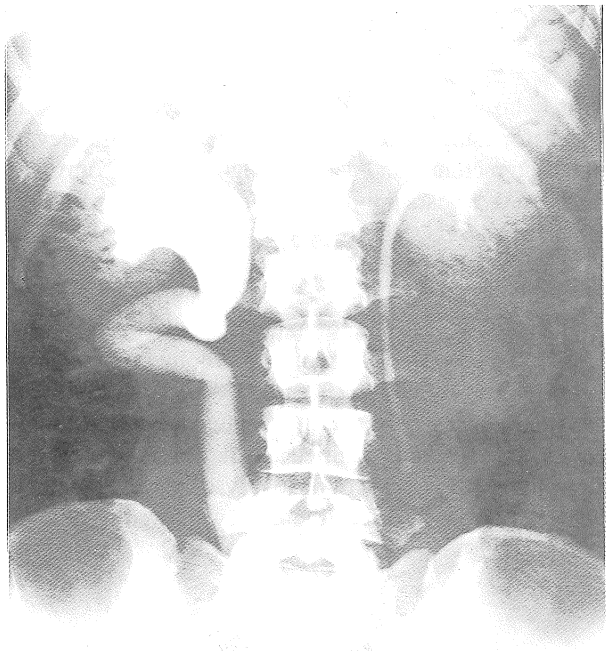

Fig. 1:
IVP shows marked hydroureter and hydronephrosis on the right side with a normal nephrogram on the left side. The arroes point to the site of obstruction

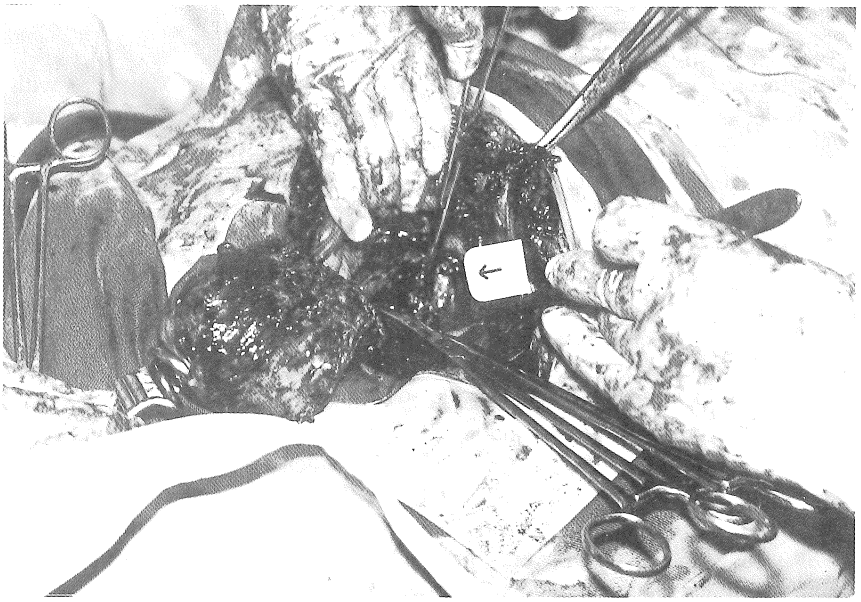

Fig. 2: The right ureter has been dissected and freed from the adhesions at the site of obstruction. The points of the artery forceps and dissecting foreceps show the degree of dilatation of the ureter.

Case 2

Another Chinese Female aged forty-four years, who was a Para one, the child having been born seventeen years previously, had a left nephrectomy for a staghorn calculus with pyelonephrosis eleven years previously. She had also had a total hysterectomy and left salpingo-oophorectomy for adenomyosis and endometriosis by another surgeon five years previously. Operation then had been extremely difficult because of dense adhesions. She had been started on Depot Medroxyprogesterone in September 1987 because of induration and tenderness at the vault. She was referred to me by her physician in September 1990 because of lower abdominal pain more on the right side. On pelvic examination, there was a mass, about 6 cm. in diameter, in the right fornix. Ultrasound examination confirmed a large right ovarian cyst and an intravenous pyelogram showed hydroureter and hydronephrosis of the remaining kidney due to obsturction by the cyst (Figure 3). At laparotomy, there was a right tubo-ovarian mass densely adherent to the lateral pelvic wall, omentum and to intestines. The adhesions were separated, the right ureter was dissected and identified and the mass was removed (Figure 4). Histopathology confirmed a benign endometriotic cyst of the ovary. She was started on hormone replacement therapy in October 1990. Ultrasound scan of the kidney showed it to be of normal size.

Discussion

Theses two patients demonstrate the progressive nature of endometriosis and the importance of the continuance of surveillance at least up to the menopause in all patients where the diagnosis of endometriosis has been confirmed. The first patient developed obstructive uropathy with a large mass only five months after she was found to be free of the disease. The second patient developed endometriosis of the residual ovary with obstuctive uropathy less than three years after she had been given progesterone therapy for recurrence after initial surgery. During the follow-up of patients, there must be a higher awareness of the possibility of ureteric obstruction and an ultrasound scan of the

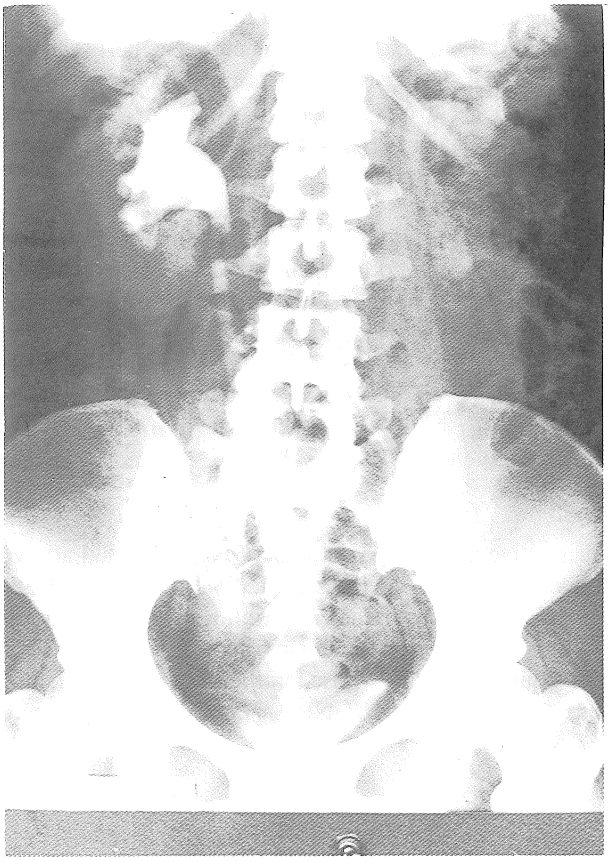

Fig. 3:
IVP shows hydroureter and hydronephrosis on the right side. The left kidney is absent due to a previous nephrectomy. The arrow points to the site of obstruction of the ureter.

Fig. 4: The right ureter has been dissected and freed from the adhesions a tthe site of obstruction. The artery forceps points to the dilated ureter.

kidneys must be done if there is marked induration and involvement of the uterosacral and cardinal ligaments or if the patients do develop pains in the loins or the lower abdomen, particularly on one side. Failure to make an early diagnosis could lead to renal atrophy with renal failure in about thirty per cent of patients[3]. Kane et al[3] reported a twenty-one year old nulligravid woman with undiagnosed endometriosis who had a five-year history of hypertension and chronic left flank pain and who finally presented with chronic renal failure.

The menopause or bilateral ovarian ablation does cure endometriosis but endometriosis can recur if the patient was started on hormone replacement treatment or if residual ovarian tissue had been left behind in the premenopausal patient. Ray J. et al[5] reported a case of endometriotic obstructive uropathy in a postmenopausal patient on hormone replacement therapy.

The obstruction of the ureter usually occurs in the pelvis and is associated with other endometriotic lesions in adjacent areas. Ballanger P.[6], however, described a case where the obstruction was in the lumbar region and was caused by isolated endometriotic disease. This was not noted in my two patients.

The ideal treatment for endometriotic obstructive uropathy is removal of the uterus and all ovarian tissue with ureteral dissection and freeing of the ureter. This was carried out in these two patients. However, if the endometriotic lesion is intrinsic and the obstruction is not relieved by freeing the ureter, then excision of the endometriotic foci and reimplantation of the ureter into the bladder or reanastomosis of the ureter will have to be carried out. In younger patients whose families are incomplete, medical treatment with Danazol or gonadotrophin releasing hormone (GNRH) agonists has also been found to be effective.

Appel R.A[7] reported one case of bilateral ureteric obstruction due to endometriosis that responded to Danazol therapy. Rivlin M.E. et al[8] reported on three patients who were treated with GNRH agonist (Leuprolide acetate) for six to nine months as a pre-operative course. Two of the patients had relief of the obstruction but, in one who had intrinsic ureteral endometriosis, it was a failure. Matsura et al.[9] treated a twenty-one year old patient with unilateral ureteric obstruction with extensive endometriosis initially with conservative surgery followed with Danazol and found that it took about five months for the obstruction to be relieved. It is, therefore, mandatory that careful surveillance of the renal function be maintained when a patient is on medical treatment.

Basically, the treatment depends on the severity of ureteric obstruction. In the presence of deteriorating renal function, urgent treatment by surgical means will be necessary. In mild obstruction without renal compromise, there is a place for medical therapy[10].

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