

## ENDOMETRIOSIS IN ASIAN WOMEN: A RETROSPECTIVE STUDY

F H M Tsakok  
T K Ong  
Y M Yong  
S S Ratnam

Department of Obstetrics and Gynaecology  
National University of Singapore  
Kandang Kerbau Hospital  
Singapore 0821

F H M Tsakok, M.Med. Ph.D.  
Associate Professor

T K Ong, MBBS, M.Med., MRCOG  
Registrar

Y M Yong, BSc (Hons)  
Biostatistician

S S Ratnam, FRCOG  
Senior Professor

### SYNOPSIS

In a retrospective study of 384 patients with visual diagnosis of pelvic endometriosis seen between 1973 and 1977 the condition was most often found in the age group 25 to 35 years (75.5%). Most of them were nulliparous 50.5% or of low parity 31.3%. Pelvic pain was the commonest symptom 68.5% followed closely by the inability to conceive 62.8%. The most common pelvic finding was tenderness and nodularity of the uterosacral ligaments 54.6%. In 24.7% of cases, the ovaries were involved in the condition. Mild endometriosis was found in 33.6%, moderate endometriosis 14.1% and severe endometriosis in 39.6%. Adenomyosis was found concomitantly or alone in 18%.

Of the 309 patients who had treatment, 109 had only medical treatment with continuous progestogens, 79 had surgery only and 121 had combination treatment with surgery by laparoscopy only. Of the 38 patients who had reactivation of symptoms within a year, 26 occurred after medical treatment only, 2 after surgery only and 10 after combined treatment. The best subjective result was for pelvic pain; 40% had relief of the symptom. The pelvic signs had resolved in 59.7% after treatment. Of those trying to conceive, only 29.3% achieved pregnancy.

Our study concludes that endometriosis should be suspected and looked for in subfertile patients and those complaining of pelvic pain in one form or other. Results seem to be best when the disease can be completely removed by surgery with or without conservation of reproductive function. Recurrence of symptoms was highest with medical treatment alone. When medication was combined with incomplete removal of endometriosis by laparoscopic surgery, the recurrence was substantial.

### INTRODUCTION

Although endometriosis was described in detail more than a century ago, it continues to be one of the enigmatic diseases affecting the woman in the reproductive age group.

In Singapore endometriosis was an uncommon diagnosis two decades ago but has been noted with increasing frequency during the past decade largely due to an increasing awareness amongst gynaecologists of the occurrence of this condition and the availability of better diagnostic facilities. Whether there is a true increase in incidence is difficult to establish (1).

It is the purpose of this paper to present the clinical and diagnostic features and results of treatment of the condition in women attending the University Department at Kandang Kerbau Hospital between the years 1973 and 1977.

**MATERIALS AND METHODS**

Three hundred and eighty-four consecutive patients from the operation register with a visual diagnosis of pelvic endometriosis seen between the years 1973 and 1977 in the Department of Obstetrics and Gynaecology, National University of Singapore, Kandang Kerbau Hospital were included. Diagnosis of pelvic endometriosis was made when the typical powdery brown/blue match head deposits in the pelvic peritoneum without or with adhesions, distortion of the pelvic organs, fixity and fibrosis, were seen either through a laparoscope or by laparotomy. Histological confirmation was obtained in those undergoing laparotomy but only in a few at laparoscopy.

The information from twenty-six cases seen in the early part of the study of the 384 patients analysed was limited.

**RESULTS**

**Distribution of years seen**

The distribution of patients seen by year is shown in Table 1. The majority of the cases occurred in 1976 and 1977. This was because better records were kept in these and subsequent years. Also, more laparoscopies were performed. During these two years, 10,709 new gynaecological patients were seen in the Department. This number excludes the patients coming for legal abortion. The incidence of endometriosis is at least 2.3%. The true incidence is higher than this because many patients suspected of having the disease are not subjected to laparoscopy or laparotomy.

**Table 1**  
**Distribution Of Patients First Seen During Period 1973-1977 In The Department Of Obstetrics & Gynaecology, National University Of Singapore, Kandang Kerbau Hospital**

Year First Seen	N = 384	
	%	
1973	10.9	
1974	8.3	
1975	9.1	
1976	35.9	
1977	28.6	
Unknown	7.0	

Age Distribution, parity status and ethnic distribution are shown in Table 2, 3 and 4 respectively. Most of the patients (75.5%) were between 25 to 40 years and 81.3% were nulliparous or uniparous. Tendency of certain ethnic groups to be spared from endometriosis in this instance the Malays had been noticed before. Jeffcoate (2) thought that the disease was uncommon in Indians and Kistner (3) in the Blacks.

**Table 2**  
**Age Distribution**

Age	N = 384	
	%	
< 20 years	0.8	
20 — < 25	9.4	
25 — < 30	35.7	
30 — < 35	25.0	
35 — < 40	14.8	
40 — < 45	7.8	
45 & above	6.3	
Unknown	0.3	

**Table 3**  
**Parity Distribution**

Parity	N = 384	
	%	
0	50.5	
1	31.3	
2	2.9	
3	4.4	
4	2.1	
5 & above	1.0	
Unknown	7.8	

**Table 4**  
**Ethnic Distribution**

Ethnic Group	N = 384		Gen. Pop. %
	%		
Chinese	75.8	77.6	76.6
Malay ***	3.6	12.6	15.6
Indian ***	16.7	8.6	6.1
Others	3.9	1.3	1.6

\*\*\* p < 0.001

N = Study Group

U Unit = Patients seen in University Unit

Gen Pop = General Population

### Educational Level

More than half (53.3%) of the women with endometriosis had at least secondary education. Singapore education level for women in the years of study was 35.1% for secondary education and above. When compared to the education level of women in Singapore the women under study seems to be more educated than the females in the general population (statistically,  $p < 0.001^{***}$ ). The necessary delay is associated with later age of marriage and child bearing and could contribute to the condition requiring medical attention.

### Age of Marriage

The median age of marriage in the study group was 26.1 years as compared to median age of marriage in Singapore women of 24.8% years. The age of marriage was later than that of general population.

Presenting symptoms and the findings on pelvic examination are shown in Table 5 and 6 respectively.

**Table 5**  
Presenting Symptoms in Women With Endometriosis

	N = 384	
	%	
Inability to conceive	62.8	} 68.5
Dysmenorrhea	29.2	
Dyspareunia	14.6	
Visceral pain	17.4	
Low backache	7.3	
Abnormal bleeding	25.2	
Pelvic tumour	6.0	

NB: A patient can have more than one presenting symptom.

**Table 6**  
Pelvic Examination

	N = 384
	%
One or both uterosacral ligaments nodular/tender	54.6
One or both ovaries enlarged/palpable	24.7
Enlarged uterus	26.6
Anteverted or retroverted fixed	15.9
Retroverted uterus	30.2
Fixed retroverted	11.2
Fixed anteversion	4.7

The extent of disease was determined by laparoscopy or laparotomy and was classified into mild, moderate and severe according to Acosta et al (4). In some cases, although endometriosis was diagnosed by visualisation, the extent of the lesions was not described so that the disease could not be categorised. Results are shown in Table 7. Adenomyosis was found concomitantly in 8% of patients. These patients had histological confirmation of the disease.

**Table 7**  
Extent Of Endometriosis On Laparoscopy

Diagnosis	N = 384
	%
Mild endometriosis	33.6
Moderate endometriosis	14.1
Severe	39.6
Not stated	12.8

### Treatment

Three hundred and nine patients had treatment for their condition, of which 109 had only medical treatment, 79 had only surgical treatment and 121 had a combination of medical and minimal laparoscopic surgery.

Medical treatment involves the treatment of the endometriosis with hormones whilst surgical treatment conservative and radical surgery. No microsurgical techniques were used.

### Effect of Treatment on Infertility

Of the 241 patients with inability of conceive, 71 or 29.5% conceived. Of the 143 patients with endometriosis and another associated female factor contributing to infertility, 39 became pregnant (27.3%). Of the 68 patients with endometriosis and a male factor associated with infertility, 15 conceived (22.1%). In this series, the overall pregnancy rate for those with inability to conceive was less than one-third.

**Table 8**  
Effect Of Treatment On Infertility

	No.	No. Pregnant	
Complaint of inability to conceive	241	71	(29.5%)
Endometriosis and another associated female factor	143	39	(27.3%)
Endometriosis and a male factor	68	15	(22.1%)

### Effect of Treatment on Pelvic Pain and Menstrual Abnormalities

#### Subjective Results:

Of the 309 patients known to have treatment, 105 patients had neither pelvic pain nor menstrual abnormalities.

The subjective results of treatment for the 204 patients

with pelvic pain and/or menstrual abnormalities were 83 (40.7%) with complete relief, 68 (33.3%) with partial relief and 11 (5.4%) with no relief. The subjective results for 42 (20.6%) patients were unknown.

**Objective Results**

The objective results were that derived from a pelvic examination of 309 patients known to have treatment. In 26 (8.4%) objective results were not applicable since there were no known pelvic signs initially. There was complete

resolution of the disease in 92 (32.5%) partial resolution in 77 (27.2%), no resolution in 7 (2.5%) and unknown in 107 (37.8%) of the 283 patients who had pelvic signs before treatment.

Of the 151 patients who had relief subjectively after treatment, the duration of relief from symptoms was up to one year in 31 (20.5%) patients. Twenty-five patients (16.6%) had relief up to two years and 25 (16.6%) more than two years and 32 (21.2%) had complete relief. The remaining was asymptomatic when last seen.

**Table 9**  
**Effect Of Treatment On Pelvic Pain & Menstrual Abnormalities**  
**Subjective Results**

Subjective Results	Number with Treatment	Number Without Treatment/And Unknown	Total
Not applicable	105	—	105
Complete relief	83	—	83
Partial relief	68	—	68
No relief	11	—	11
Unknown	42	75	117
<b>Total</b>	<b>309</b>	<b>75</b>	<b>384</b>

**Table 10**  
**Effect On Treatment On Pelvic Pain & Menstrual Abnormalities**  
**Objective Results**

Objective Results	Number With Treatment	Number Without Treatment/And Unknown	Total
Not applicable	26	—	26
Complete response	92	—	92
Partial response	77	—	77
No response	7	—	7
Unknown	107	75	182
<b>Total</b>	<b>309</b>	<b>75</b>	<b>384</b>

**Table 11**  
**Duration Of Relief From Symptoms**

<b>Duration of relief</b>	<b>N = 151(83 complete relief)</b> <b>(68 partial relief)</b>
Up to 1 year	31 (20.5%)
Up to 2 years	25 (16.6%)
More than 2 years	23 (16.6%)
Complete relief	32 (21.2%)

### Reactivation of Symptoms in Relation to Treatment

Of the thirty-eight patients who had reactivation of symptoms within a year, 26 occurred after medical treatment only, 2 after surgery only and 10 after laparoscopic surgery and medical treatment.

**Table 12**  
**Reactivation Of Symptoms After Treatment**

Reactivation of Symptoms	N = 384	%
Unknown/NA	346	90.1
After medical	26	6.8
After surgical	2	0.5
After both	10	2.6

### DISCUSSION

In a retrospective study like this, information is often inaccurate and incomplete. It however gives an idea of the type of women suffering from this condition, the presenting symptomatology and the frequency at which the condition can be missed during a clinical pelvic examination. It also gives an indication of the success of treatment.

The incidence of 2.3% is low compared to most series. It may be due to inclusion only of cases who had visual confirmation of the disease. Many patients suspected of having endometriosis were not laparoscoped. Endometriosis was found after menarche (14 years) and near the menopause (55 years). The wide scatter within which the disease occurs from adolescence to perimenopause has been noticed before. The median age of occurrence was 31 years. It was more frequent in nulliparous women and those who had one previous pregnancy. The median age of marriage of 26 years was slightly later than the general population which was at 24 years. In this study, there seem also more women in the study with secondary education than in the general population. There is a higher incidence of endometriosis in Indians whilst the Malay women seem to be relatively spared of the disease. It could be that the Malay population marry and start a family early. The difference was significant even after comparing with the Department's gynaecological patient population  $p < 0.001$  (Table 4) so as to exclude the possibility of patient's selection of physician. The average parity distribution according to ethnic group in the study is shown in Table 3. Of the symptomatology pelvic pain including dysmenorrhoea was the most common presenting symptom followed closely by the inability to conceive as is commonly recognised. Menstrual disturbance however, was observed to be a frequent associated complaint of which the literature is relatively silent, whilst a pelvic tumour was the presentation in only 6% of patients. (Table 5) The most common clinical finding was abnormality of the uterosacral ligaments on pelvic examination. Fixity of the uterus was found in 15.9% and retroversion of uterus in 30.2%. However, in about half, endometriosis was not diagnosed by pelvic examination.

The extent of endometriosis was considered to be mild in at least one-third of the patients (33.4%) and severe in 39.4%. Adenomyosis was an associated condition in 18%.

The diagnosis of endometriosis depends very much upon suspicion and competent and meticulous examination. Unexplained infertility, chronic pelvic pain, dysmenorrhoea and dyspareunia in the patient's history should arouse the suspicion of this diagnosis. Nodularity and tenderness of the uterosacral ligaments, fixity and retroversion of the uterus on pelvic examination are characteristic of endometriosis no matter what the symptoms are.

Less than one-third (29.3%) became pregnant with or without treatment. About half (43%) will have complete relief from symptoms after treatment but more than half (52.9%) show signs of complete resolution. However, the cure is not permanent. A third (35.6%) may have only relief from up to six months. Reactivation seems to occur more frequently after only medical treatment. The unremarkable results in these patients may be due to the reliance made on medical treatment rather than meticulous removal of lesions by surgery usually at a laparotomy. In the cases with recurrence after combination treatment endometriotic lesions were cauterised through the laparoscope where incomplete removal of disease is highly possible. Being a retrospective analysis, the information on results of treatment were incomplete and inadequate and therefore it is not possible to draw conclusions from this study.

### CONCLUSION

Contrary to general belief that endometriosis is a disease predominantly found among the Caucasians, this study has shown that endometriosis is encountered fairly commonly in Asian women.

Although infertility and pelvic pain are common symptoms, the presenting symptoms are varied and can mimic any gynaecological condition. Abnormal vaginal bleeding is a common associated complaint and is usually not stressed in the literature.

The disease is not confined to the thirties but can also occur at adolescence and the perimenopausal age group.

It is important to examine the pouch of Douglas and especially the uterosacral ligaments for tenderness and nodularity to diagnosis of the condition. Even then 50% are missed by clinical examination.

Careful visualisation of the pelvic peritoneum by laparoscopy or laparotomy is imperative to confirm the diagnosis. Adenomyosis co-existing with peritoneal endometriosis co-existed in 18%.

A prospective study will be necessary to evaluate the results of medication, surgery or a combination of both.

There is indication in this retrospective study that hormone treatment alone for endometriosis as was the case in the majority of patients did not produce optimum results in the pregnancy rate, the relief of symptoms nor the eradication of the disease.

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