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PREVALENCE AND PRESENTATION OF ENDOMETRIOSIS IN PATIENTS ADMITTED IN NISHTAR HOSPITAL, MULTAN

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Background: Endometriosis is responsible for varied and disabling symptoms, and its adverse effects on reproductive potential are sources of widespread frustration and disappointment. This study was done to find out the prevalence and pattern of presentation of the patients with endometriosis. ***Methods:*** Two hundred and one consecutive patients, aged 20-45 years, having signs and symptoms suggestive of endometriosis, attending the gynaecology outpatient department of Nishtar Hospital, Multan, during one year i.e. 1995 to 1996, were prospectively included in this study. All such patients were subjected to laparoscopy or laparotomy for final diagnosis. The severity of the disease was documented and classified according to the revised American Fertility Society staging system. ***Results & Conclusions:*** The prevalence of endometriosis was 5.2% all gynecological admissions. Our findings of a prevalence of endometriosis of 24.88% in 201 laparotomies/laparoscopies, negates the commonly held view that endometriosis is a rare disease in Pakistan. We have also recorded a high incidence of infertility among patients suffering from endometriosis. The prevalence and pattern of presentation of the patients are comparable with the results reported from all over the world. It is, therefore, concluded that endometriosis is as common among Pakistani women as elsewhere in the world. The pattern of presentation and complications are also similar.

INTRODUCTION

Endometriosis may be defined as the presence of heterotopic endometrial tissue that structurally and functionally resembles endometrial glands or stroma. The structures most commonly affected by endometriosis include ovaries, uterosacral ligaments, pelvic peritoneum, rectovaginal septum, and lower genital tract. Other sites that can be involved include small and large bowel, appendix, hernial sacs, umbilicus, perineum, bladder, ureter, sciatic nerve, pleura, lungs, episiotomy scar, caesarean scar, femoral lymphatic chain, and skin.

Histologically, foci of endometriosis differ somewhat from normally located endometrium throughout the menstrual cycle. Proliferative changes are less pronounced. Although some secretory changes usually are seen, they may not be present at all. However, the ability of this tissue to respond to ovarian hormones forms the basis for its tendency to proliferate and disseminate. Although it is a benign disease, it has a unique capacity to spread and to invade other tissues in a manner remarkably similar to that of malignancy. True malignancy, however, is very rarely associated with endometriosis.

Endometriosis is one of the most common conditions encountered in gynaecologic patients. It is the second most common gynaecological disorder in the West, after fibromyomata and is found in 9.6% to 18.7% of all gynaecological laparotomies and laparoscopies[1]. Akhter[2] has reported an incidence of 6% in Pakistani women. Kistner[3] demonstrated histological evidence of endometriosis in 21% of all laparotomies performed for gynaecologic disease while Weed and Arquembourg[4] found it in 18.7% of 2000 laparotomies.

Endometriosis is responsible for varied and disabling symptoms, and its adverse effects on reproductive potential are sources of widespread frustration and disappointment. However, there are no characteristic symptoms referable to endometriosis. Menstrual disturbances are often present. Dysmenorrhoea is a frequent symptom and may be moderate or very severe; there being no correlation with extent of disease. When the rectovaginal septum or uterosacral ligaments are involved, the dysmenorrhoea is often referred to the lower sacral or coccygeal region.

Infertility is present in the majority of the cases. The patients whose major complaint is infertility, endometriosis is a major cause. The precise mechanism by which endometriosis causes infertility need to be elucidated. This study was done to find out the prevalence and pattern of presentation of the patients with endometriosis.

MATERIALS AND METHODS

Two hundred and one consecutive patients, aged 20-45 years, having signs and symptoms suggestive of endometriosis, attending the gynaecology outpatient department of Nishtar Hospital, Multan, during one year i.e. 1995 to 1996, were prospectively included in this study. The women selected with history of secondary dysmenorrhoea, deep dyspareunia,

infertility, dysmenorrhea unresponsive to Ibuprofen therapy, and abnormal uterine bleeding combined with pelvic examination findings of vaginal wall lesions, cervix lesions, nodular uterosacral ligaments, cul-de-sac induration and fixed adnexal mass.

All such patients were subjected to laparoscopy or laparotomy. The criteria for laparoscopic diagnosis of endometriosis were the presence of mulberry spots, powder burns, stellate scars, dense adhesions, chocolate cysts of the ovary and ovaries adherent to the posterior leaf of the broad ligament. Diagnosis was established clinically and by histopathology in cases of laparotomies.

Demographic details and clinical information noted were age, socio-economic status, education, weight parity, symptoms and their duration, menstrual history, contraceptive history, previous investigations, treatment, and indications for laparoscopy/laparotomy.

The severity of the disease was documented and classified according to the revised American Fertility Society (1985) staging system. Briefly, points were assigned based on the size and depth of the lesions and severity of adhesions. The points were summed up and the patients assigned to one of the four stages:-

Stage-I – minimal disease 1-5 points.
Stage-II – mild disease 6-15 points.
Stage-III – moderate disease 16-40 points.
Stage-IV – severe disease more than 40 points.

RESULTS

Total number of gynecological admissions during the period of one year period from February 1995 to February 1996 was 961. Of these 961 patients, 201 (20.92%) patients were suspected of having endometriosis on history and clinical findings. Out of these 201 patients, 50 (24.88%) women were diagnosed to have endometriosis on laparoscopy or laparotomy. No case of vaginal wall or cervical endometriosis was found during the study period. Thus the prevalence of endometriosis was 5.2% gynecological admissions.

Demographic details of the study population are given in Tables-1-5. Both groups (patients without endometriosis and with endometriosis) were similar in age (Table-1). Majority, 77%-78% were between 20-30 years of age. Only one patient was less than 20 years of age, and one was more than 40 years.

Similarly, no differences were found in weight, education and socio-economic status of the two groups (Tables-2, 3,4).

Twenty two (44%) of the patients were Punjabis, 20 (40%) were Sarieki, 4 (8%) were Urdu speaking, 2 (4%) were Pakhtoons, 1 (2%) was a Balouch and another 1 (2%) was a Sindhi.

Seventy two per cent of the 50 patients diagnosed to have endometriosis were nulliparous (Table-5).

Severity of the disease was classified according to the revised (1985) staging system of the American Fertility Society. Thirteen (26%) of the patients had severe disease (Stage-III-IV) involving the uterus, tubes, ovaries and peritoneum. The Pouch of Douglas was obliterated and lesions were deep seated with multiple adhesions involving the peritoneum, omentum, gut and other pelvic viscera. Severity of the disease was almost equally distributed among the 50 patients except that only 4% had minimal (Stage-I) disease (Table-6).

Table-7 summarizes the presentation pattern in 50 patients diagnosed as having endometriosis. Seventy two per cent presented with two or more problems. The problems included infertility (both primary and secondary), pelvic pain, dyspareunia, and menstrual disorders. Thirty six (72%) complained of infertility (both primary as well as secondary), 28 (56%) patients complained of pelvic pain, 18 (36%) complained of dyspareunia and 10 (20%) complained of menstrual disorders.

Out of the 961 gynecological admissions, during the study period 172 (a prevalence of 17.90%) had presented with the complaint of infertility. On the other hand, infertility was seen in 36/50 (72%) patients with endometriosis. However, only 25 of these 36 patients had associated symptoms and clinical findings suggestive of endometriosis while in the other 11 patients endometriosis was diagnosed on laparoscopy only.

Out of 201 patients 187 (93.04%) underwent diagnostic laparoscopy and 14 (6.97%) had laparotomy for various reasons. Fifty (24.88%) patients were found to have endometriosis on laparoscopy or laparotomy which was confirmed on histopathology. Diagnosis of endometriosis was suspected on pelvic examination during menses, in 35 (17.41%) of 201 patients. Examination during menses was performed because the patients had presented during menses and had come from remote areas. This diagnosis was confirmed in 25 cases (71.43%) patients on laparoscopy (18 cases) or laparotomy (7 cases) while ten (28.57%) patients had no evidence of endometriosis.

Table-1: Age Distribution In 201 Patients

Total population		**Patients with endometriosis**	
Age group	Number (%)	Age group	Number (%)
< 20 years	5 (02.49)	<20 years	01 (02.00)
20-30 years	156 (77.11)	20-30 years	39 (78.00)
31-40 years	38 (18.91)	31-40 years	09 (18.00)
> 40 years	3 (01.49)	> 40 years	01 (02.00)
Total	201	Total	50

Thus 25 (50%) of the cases of endometriosis were suspected and subsequently confirmed to have endometriosis. Rest of the 25 (50%) were detected on laparoscopy (Table-8-10). Indications for laparotomy included mass abdomen in 7 patients, gross obesity in 2 patients, and frozen pelvis on clinical examination in 5 patients.

Table-2: Weight Distribution In 201 Patients With Endometriosis

Total population		Patients with endometriosis	
Weight group	Number (%)	Weight group	Number (%)
< 50 kg	14 (06.97)	< 50 kg	04 (08.00)
50-60 kg	165 (82.09)	50-60 kg	41 (82.00)
> 60 kg	22 (10.95)	> 60 kg	05 (10.00)
Total	201	Total	50

Table-3: Educational Status Of 201 Patients With Endometriosis

Total population		Patients with endometriosis	
Education	Number (%)	Education	Number (%)
Nil	11 (06.47)	Nil	03 (06.00)
Upto 5 years	08 (03.98)	Upto 5 years	02 (04.00)
5-10 years	81 (40.30)	5-10 years	21 (42.00)
> 10 years	101 (50.25)	> 10 years	24 (48.00)
Total	201	Total	50

Table-4: Socio-Economic Status Of 201 Patients

Total population		Patients with endometriosis	
Income (PM)	Number (%)	Income (PM)	Number (%)
< Rs.5000	83 (41.20)	< Rs.5000	20 (40.00)
Rs.5000-10000	99 (49.25)	Rs.5000-10000	25 (50.00)
> Rs.10000	19 (09.45)	> Rs.10000	05 (10.00)
Total	201	Total	50

Table-5: Parity Of 50 Patients With Endometriosis

Parity	Number of cases	Percentage
Nulliparous	36	72.00
1-3	13	26.00
> 3	01	02.00

Table-6: Severity Of Endometriosis In 50 Patients According To AFS Classification

Stage of disease	Number of cases	Percentage
III-IV (Severe)	13	26.00
III (Moderate)	16	32.00
II (Mild)	19	38.00
I (Minimal)	02	04.00

Table-7: Presentation Of 50 Patients With Endometriosis

Presentation	Number of cases	Percentage
Patients with one problem	14	28.00
Patients with two problems	30	60.00
Patients with > two problems	06	12.00

Table-8: Pelvic Examination On Findings In 201 Patients

Findings	Number of cases	Percentage
Suggestive of endometriosis	35	17.42
No suggestive of endometriosis	166	82.58
Total	20	100.00

Table-9: Cross Tabulation Of Pelvic Findings With Laparoscopic Findings In 187 Patients To Show The Relation Between The Two

Pelvic examination findings	Yes (%)	N0 (%)	Total (%)
Suggestive of endometriosis	18(09.63)	08 (04.28)	26(13.90)
No suggestive of endometriosis	25(13.37)	136(72.73	161(86.1)
Grand total	43(23.00)	144(77.01	187(100)

Table-10: Cross Tabulation Of Pelvic Findings With Laparotomy Findings In 14 Patients To Show The Relation Between The Two

Pelvic examination findings	Yes (%)	N0 (%)	Total (%)
Suggestive of endometriosis	07(50.00)	02 (14.29)	09(64.29)
No suggestive of endometriosis	-	05(35.71)	05(35.71)
Grand total	07(50.00)	07(50.00)	14(100.00)

DISCUSSION

Prior to recent evidence that a predisposition to the development of endometriosis may be determined by hereditary factors, attempts had been made to identify women at increased risk by means of a variety of demographic correlates[5,6]. Certain personality traits (achieving, egocentric, overanxious, perfectionist, intelligent) and body build (underweight) have been reported with increased frequency in affected women. The validity of such observations has not been established. We did not find a particular group of patients to be more susceptible to endometriosis. These findings support the suggestion that there is no particular personality trait or ethnic predilection in this disease.

The true incidence of endometriosis is difficult to establish since endoscopy or laparotomy is required for definitive diagnosis and the disease undoubtedly exists in many patients who do not have symptoms that lead to a surgical procedure. There seems to be a racial, social and geographic distribution of endometriosis. For example, Bocker *et al* [7] have reported an exceptionally low incidence of 1.12% in a unique ultra-orthodox Jewish population over the past 20 years by reviewing 1434 hysterectomy specimens. These findings may suggest

the possible effects of heredity, religious and social behaviour on the etiology of endometriosis.

It is generally believed that the disease is relatively less common in India, Pakistan, Iran, countries of the Middle East, and Black Africa[8]. However, these observations are merely variations in clinical impression. No solid data exist to support this contention. On the contrary, a few reports which are available from these countries, seem to refute it.

Our results reveal that overall prevalence of endometriosis during the study period was 5.20 per 100 gynecological admissions. Findings of this study, however, cannot be generalized to the population in large because ours is a tertiary care centre and the patients were not a random sample of the general population. Moreover, we investigated only those patients in whom history and clinical findings were suggestive of endometriosis. It is well known that endometriosis may be present in totally asymptomatic women while such patients were excluded from our study due to its design. This fact has undoubtedly introduced an element of bias. Nevertheless, these findings do suggest that the disease is not as rare as it has been supposed. Our view is supported by a recent report from Faisalabad[9]. They found a prevalence of 12.5% in 200 women undergoing diagnostic laparoscopy for a variety of reasons.

The clinical impression of low incidence of endometriosis in Asian and black women may have been due to limited medical and diagnostic facilities available to these women. With the improvement of these facilities, and wider use of surgical interventions in these patients, more and more endometriosis cases will undoubtedly be detected. For example, incidence of endometriosis was found to be high in Iran[10], black women in America[11], in Japanese women in Hawaii and Japan[12], Chinese women in Taiwan[13], and in Caucasian women in Italy[14]. In our study the incidence of association of endometriosis with infertility is relatively higher and may be a reflection of selection bias as already noted.

Medical therapy for endometriosis is often used as primary therapy for symptomatic disease or as an adjunct to surgical management of pelvic pain or infertility[16]. Endoscopy has replaced laparotomy in nearly all patients requiring surgical treatment of endometriosis. Follow up laparoscopy is often indicated because of the association with secondary adhesive formation. Hysterectomy and oophorectomy may be performed for recurrent extensive disease not controlled by medical or conservative surgical procedures[17].

We chose medical treatment as primary therapy in 22% of our patient population. Another 46% underwent laparoscopic treatment followed by adjunctive medical therapy. In 24% of our patients, surgical treatment was the primary modality while 8% underwent radical surgery due to extensive disease not amenable to medical therapy and no desire to reserve fertility. Follow up data for these patients are not yet available and therefore, cannot be reported.

Due to the adverse effects of endometriosis on general health as well as the reproductive potential of the affected women, it is suggested that a high index of suspicion be maintained. In addition, we need to allocate more resources to provide early and accurate diagnosis and skilled physicians to treat this crippling disease.

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