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Incidence of endometriosis in infertile women: clinical and laparoscopic characteristics

Dr Arushi Chaudhary[1], Dr Meenakshi Chauhan[2], Dr. Daksh Sethi[3]

[1]PG Student, PGIMS Rohtak
[2]Professor PGIMS Rohtak
[3]PG Student, PGIMS Rohtak

ABSTRACT

Introduction: Endometriosis is a common disease affecting women of reproductive age. Prevalence of endometriosis in general population is difficult to determine and is seen to affect approximately 33% women suffering from chronic pelvic pain and in 10% of adolescents and young adults with severe dysmenorrhea, largely estimated by laparoscopic visualization of the pelvic organs.

Aims and objectives: To determine the incidence of endometriosis as well as the clinical and laparoscopic characteristics in infertile women with endometriosis.

Materials And Methods: Medical records of all women presenting to gynaecologic clinics with primary complain of primary or secondary infertility and were subjected to diagnostic laparoscopy and dye test and were diagnosed to have endometriosis as the cause of infertility were included in the study.

Results: Out of 102 medical files that were analyzed, endometriosis was reported in 16 (15.68%). The average age was 29±3.9 years. 64 patients had primary infertility (62.74%) and 38(39.26) secondary infertility. In 3 patients endometriosis (18.75) was minimal, mild in 4 (25%), moderate in 6 (37.5) and severe in 3(18.75). In severe endometriosis the predominant symptom was the moderate or severe dysmenorrhea, while in mild and moderate endometriosis was mild dysmenorrhea ($p < 0.007$).

Conclusion: Endometriosis with infertility is not an uncommon disease and clinical symptoms and most clinical signs do not correlate with laparoscopic stage of the disease. Therefore it is difficult to predict stage or prognosticate the outcome based on clinical findings alone laparoscopy remains the preferred technique for diagnosis as well as staging of endometriosis.

Keywords: Endometriosis; Infertility, Laparoscopic

INTRODUCTION

Endometriosis is a common disease affecting women of reproductive age with a very diverse range of presentations that include pelvic pain, dysmenorrhoea, dyspareunia or subfertility[1].Prevalence of endometriosis in general population is difficult to determine and is seen to affect approximately 33% women suffering from chronic pelvic pain and in 10% of adolescents and young adults with severe dysmenorrhea, largely estimated by laparoscopic visualization of the pelvic organs.[2,3]However, the frequency in women presenting with infertility has been reported to vary between 20-50%.[4,5] Endometriosis is one very important cause of unexplained infertility and can be diagnosed in early stages by laparoscopy. Laparoscopy has revolutionized management of women with endometriosis. Diagnosis of endometriosis depends on visualization of endometriotic lesions and histologic confirmation. Endometriotic implants have a multitude of appearances: powder burns, red, blue-black, yellow, white, clear vesicular and peritoneal windows. Diagnostic laparoscopy is often combined with operative procedures to treat manifestations and symptoms of endometriosis. This often includes removal or laser vaporization of endometriotic implants, lysis of adhesions, restoration of normal anatomy and removal or fulguration of ovarian endometriomas endometriosis was classified using Revised American Society for Reproductive Medicine classification of endometriosis: 1996.[6,7] A definitive diagnosis of endometriosis can only be made via laparoscopy and is considered as the gold standard.[8]

Objectives

To determine the incidence of endometriosis as well as the clinical and laparoscopic characteristics in infertile women with endometriosis.

MATERIALS AND METHODS

This descriptive retrospective study was conducted at the department of Obstetrics and Gynaecology, Pt B. D. Sharma PGIMS Rohtak for the period from July 2014 to April 2016. Medical records of all women presenting to gynaecologic clinics with primary complain of primary or secondary infertility and were subjected to diagnostic laparoscopy and dye test and were diagnosed to have endometriosis as the cause of infertility were included in the study. Data was entered and analyzed in SPSS version 14.0. Frequency of endometriosis based on laparoscopic diagnosis was calculated.

RESULTS

Out of 102 medical files that were analyzed, endometriosis was reported in 16 (15.68%). The average age was 29±3.9 years. 64 patients had primary infertility (62.74%) and 38(39.26) secondary infertility. In 3 patients endometriosis (18.75) was minimal, mild in 4 (25%), moderate in 6 (37.5) and severe in 3(18.75). The most common sites in which it was found were the uterosacral ligaments, Douglas pouch and the ovaries. In severe endometriosis the predominant symptom was the moderate or severe dysmenorrhea, while in mild and moderate endometriosis was mild dysmenorrhea ($p < 0.007$).

Characteristics of women	Number of women	Percentage
Age (group)	Range 21-43 Mean: 29±3.9	
Parity	Range 0-2 Mean 1.09	
Symptoms		
1. Infertility	102	
a. Primary infertility	64	62.74%
b. Secondary infertility	38	37.25%
2. Menstrual symptoms		
Normal	51	50%
Hypomenorrhoea	18	17.64%
Oligomenorrhoea	12	11.76%
Menorrhagia	8	7.84%
Dysmenorrhoea	13	12.74%
3. Chronic pelvic pain	21	20.58%

Grade endometriosis	Number of patients	Percentage
Grade 1	3	18.75
Grade 2	4	25
Grade 3	6	37.5
Grade 4	3	18.75

DISCUSSION

The clinical signs and symptoms suggestive of endometriosis (dysmenorrhoea, dyspareunia, abnormal uterine bleeding, chronic pelvic pain and/or pelvic mass, utero-sacral ligament nodularity) are not reliable enough to justify diagnosis and treatment. Laparoscopy is considered as gold standard in diagnosis of endometriosis.The present study found the frequency of endometriosis in infertile patients to be 15.68% which is consistent with findings of various other studies done all over the globe.[5,9]The mean age of 29 ± 3.9 years at presentation, the low incidence of the disease on either extreme of ages and higher prevalence of endometriosis in women of reproductive age is also in accordance with other studies.[5,10,11]

A significant number of patients in addition to infertility had other signs and symptoms consistent with endometriosis which included chronic pelvic pain, dysmennorhea, menstrual irregularities and dyspareunia. However, none of these clinical signs are decisive of the presence of endometriosis and final diagnosis can only be confirmed by laparoscopy. Hence laparoscopic surgery remains the most definitive and accurate means of diagnosing and staging endometriosis. Out of 16 patients only 11 patients had histopathological findings suggestive of endometriosis. The findings in our study are comparable to that observed by Godinjak et al[12], 14.16% and Kaminski et al[13] 12.4%. Similar results were seen in Indian studies conducted by Kabadi et al[14] and Nayak et al[15] who observed that 12% and 12% patients respectively had endometriosis.

Endometrioma was seen in 4 (8%) of the patients. similar results were reported by Kabadi et al[14] who observed chocolate cyst in 6.66% of patients. However the result was low compared to another study conducted by Bonneau et al[16] who reported endometriosis in 75.8% patients. This discrepancy is due to the difference in racial and environmental factor as well as to the practice of avoiding sexual intercourse at time of menstruation. Microscopically, endometriotic implants consist of endometrial glands and stoma with or without haemosiderin-laden macrophages. The value of histological confirmation of the laparoscopic view for the diagnosis of endometriosis has to be further evaluated. In some studies the confirmation rate from biopsies of endometriotic lesions with a "typical" appearance has been low. This might occur because endometriotic lesions are often either extremely small or consist mainly of fibrotic tissue; because biopsies taken with forceps may miss microscopic endometriotic glands and sparse stroma hidden in fibrosis or other surrounding tissues. Thus, a biopsy might be negative because of the surgeon's limited experience, the size of the biopsy, the experience of the pathologist, the quality of the histological sample. Endometriosis was treated with electro ablation, resection of endometriotic implants and/or ovarian cystectomy. [17,18]

CONCLUSIONS

Endometriosis with infertility is not an uncommon disease in women. Clinical symptoms and most clinical signs do not correlate with laparoscopic stage of the disease. Therefore it is difficult to predict stage or prognosticate the outcome based on clinical findings alone laparoscopy remains the preferred technique for diagnosis as well as staging of endometriosis.

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