

# Incidence of Endometriosis on Laparoscopy in 230 Consecutive Infertility Patients

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## Summary

A retrospective study was conducted to analyse the causes of infertility in 230 patients who underwent diagnostic laparoscopy over a period of one year from July 1997 to July 1998 at Bombay Hospital Institute of Medical Sciences. The occurrence of endometriosis, grading and its symptomatology was noted. The incidence of endometriosis in patients presenting with unexplained infertility was also noted. The incidence of endometriosis is showing an increasing trend, which reflects better and early diagnosis and a changing social pattern of life.

## Introduction

Endometriosis is an enigmatic disease, the diagnosis of which can be confirmed only by surgical intervention, laparoscopy or laparotomy. The condition presents with varied symptoms commonest being chronic pelvic pain or infertility. Though the symptoms are characteristic, their severity may not be related to the stage of the disease. The association between endometriosis and reduced fertility is well recognised. In women presenting with infertility, the likelihood of finding endometriosis at laparoscopy is 10 fold higher than in fertile women. (Strathy et al 1982).

The present study aims at determining the incidence of endometriosis in infertile patients, as well as notes the occurrence of the disease in previously labeled cases of unexplained infertility.

## Materials and Methods

A retrospective analysis of 230 patients who underwent diagnostic laparoscopy for infertility was done. A detailed history was taken with special reference to duration of infertility, previous medical or surgical treatment for infertility. A thorough physical and gynaecological examination was done. The presence of pelvic masses or tenderness in the fornices if any was

noted. Apart from routine hematological investigations specialized investigations were performed on all patients namely; hormone assays for serum Follicular stimulating Hormone (FSH), Leutinizing Hormone (LH), Thyroid stimulating Hormone (TSH) and prolactin. A transvaginal scan was performed followed by baseline follicular studies. A hysterosalpingogram was done to note the uterine anatomy and tubal patency. A detailed semen analysis was obtained. A diagnostic laparoscopy was performed under general anaesthesia in the follicular phase of the menstrual cycle. The presence of any pathology like Tuberculosis, Pelvic inflammatory disease or endometriosis was noted. Staging of endometriosis was done on the basis of Revised American Fertility Society classification 1985. Endometriosis was also noted in previously labelled cases of unexplained infertility.

**Table I**  
Shows the staging of endometriosis on laparoscopy according to revised AFS classification 1985;

	New	Old
Minimal	19	
Mild	13	
Moderate	9	1
Severe	3	13
	44	17

**Table II**  
Shows the occurrence of endometriosis according to type of infertility

Type of Infertility	No. of cases
Primary	35
Secondary	9

**Table III**  
Shows presence of endometriosis in cases previously labelled as unexplained infertility

Minimal	9
Mild	7
Moderate	4
Severe	2
Total	22

**Table IV**  
Showing Incidence of Endometriosis (20.65%)

Stage I (Minimal)	44%
Stage II (Mild)	29%
Stage III (Moderate)	20%
Stage IV (Severe)	7%

## Results

All 230 patients underwent diagnostic laparoscopy to evaluate the cause of infertility. The age of the patients varied from 20-40 yrs., with maximum number of patients belonging to 25-30 yrs. of age group 106, followed by 57 in 31-35 yrs. age group, 53 in 20-25 yrs. and 14 in 36-40 yrs. of age group. 70.4% of patients presented with primary infertility and 29.6% with secondary infertility.

On laparoscopy, 44 patients were diagnosed to have endometriosis, which were staged according to the revised American Fertility society classification 1985. 17 were old known cases of endometriosis for review staging after treatment, as shown in Table I. Of the 44 patients, 35 presented with primary infertility and 9 with secondary infertility as shown in Table II. 73 patients were categorized as unexplained infertility according to the definition proposed by ESHRE Capri workshop 1996. 22 cases were diagnosed to have endometriosis in different stages (Table III).

In our study, we noted an incidence of 20.65% of endometriosis in infertility patients, maximum of which belonged to stage I, followed by stage II, III and IV as shown in Table IV.

## Discussion

The nature of the relationship between

endometriosis and subfertility remains controversial. The cause is evident if endometriosis leads to anatomical distortion. It is difficult to understand the mechanisms associated with minimal or mild endometriosis which reduce fertility. However the fecundity of women was found to lower with minimal or mild endometriosis as compared to women with unexplained infertility (The Canadian collaborative group on Endometriosis 1998). Unexplained infertility is a term applied to an infertile couple whose standard investigations (semen analysis, tubal patency and laboratory assessment of ovulation) yield normal results (ESHRE Capri workshop 1996). However careful scrutiny may identify some underlying cause of infertility.

Balasz et al 1996, noted a high frequency of minimal forms of endometriosis in both fertile and infertile patients and in patients with chronic pelvic pain (44.2%). In our study also the incidence of minimal endometriosis was 45%. Dmowski and Pepping 1997, noted a higher incidence of stage IV endometriosis in patients with pelvic pain (31%) as compared to infertile patients (12%). In our study also, severe disease was noted only in 7% of infertile patients. Endometriosis is a progressive disease and the longer the diagnostic delay, the more advanced is the disease at the time of laparoscopy. Hence an early diagnostic laparoscopy in the evaluation of infertile women, helps to diagnose endometriosis in its early stages and also reduces the number of patients of unexplained infertility.

## Conclusion

The incidence of endometriosis is showing an increasing trend reflecting a changing social pattern of life. Preliminary diagnostic laparoscopy leads to diagnosis of endometriosis in early stages, also reduces the number of patients of unexplained infertility.

## References

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