

Prevalence of Endometriosis in Patients with Subfertility

Tasnim Tahira, Ammara Niaz, Ayesha Khalid

ABSTRACT

Objective: To calculate prevalence of endometriosis in patients presenting with subfertility. **Study Design:** Descriptive study. **Settings:** Gynae Unit-III, Allied Hospital, FMU, Faisalabad Pakistan. **Duration:** 01-01-2016 to 31-12-2018. **Methodology:** 160 female patients presented in infertility clinic fulfilling the inclusion criteria were selected for study. There detailed history and abdomino pelvic examination was done to find any mass or cyst, tenderness in adnexa, uterine tenderness or morbidity and nodularity in pouch of douglas. After basic investigations, TAS/TVS was done in all patients. Laparoscopy was done in all patients under general anesthesia. Disease was classified using R-AFS classification score. Laparoscopic cauterization of lesion, adhesiolysis or cystectomy was done whatever required. Chorontubation was done in all patients. **Results:** Among 160 patients who underwent laparoscopy, 44 (27.5%) patient had findings suggestive of endometriosis. Majority of the patients belongs to 20-30 years (70%) while (30%) were in 31-40 years of age. Type of subfertility was primary and secondary in 75% and 25% respectively. Stage of endometriosis according to R-AFS classification was 1-2 and 3-4 in 40% and 60% respectively. 27% patient had bilateral tubal blockage. No major complication took place in any patient, however, in 10 patients (22.7%) lapascopy was converted to laparotomy due to dense adhesion with bowel. **Conclusion:** The prevalence of endometriosis in patients with subfertility is quite high. So, a prompt attempt at natural or assisted conception is required after surgical treatment of endometriosis.

Keywords: Prevalence, Endometriosis, Infertility, Laparoscopy

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INTRODUCTION

Endometriosis is a chronic disease characterized by the presence & proliferation of ectopic endometrial glands & stroma outside the uterine cavity. The estimated overall prevalence of endometriosis in population-based studies varies from 0.8-6.0%.¹ However, in sub fertile women, the prevalence seems to be 20-50%.² In a large cohort study on women of reproductive age, the risk of infertility was increased two-fold in women < 35 years with endometriosis compared with women without endometriosis.³

The etiology of endometriosis is multifactorial. The most generally accepted theory is Sampson's theory who suggested that it is caused by retrograde menstrual flux through the fallopian tube. These endometrial cells can implant on the peritoneum, ovaries, pouch of Douglas, utero-sacral ligament or on the surface of uterus. Individual susceptibility to endometriosis is influenced by genetic, anatomical, endocrine and environmental factors.⁴ It can also present as Scar Endometriosis in rare cases.⁵

The most common symptoms of endometriosis are dysmenorrhea, dyspareunia, chronic pelvic pain and subfertility. Medical treatment has been helpful in relieving the symptoms where fertility is not required. The surgical options are Laparoscopy or Laparotomy. Laparoscopy is used as a gold standard for diagnosis of disease, moreover it also provides treatment for endometrioma, pelvic adhesion & endometriotic lesion.

This study was done to calculate the prevalence of endometrium in sub fertile patients and to plan management of patients according to laparoscopic findings of disease.

METHODOLOGY

Study Design: Descriptive study.

Settings: Gynecology & Obstetrics Department, Faisalabad Medical University / Allied Hospital, Faisalabad Pakistan.

Duration: From 01-01-2016 to 31-12-2018.

Sample Size: Sample size was 160.

Methods: The patients to who were enrolled for study were those who presented in infertility clinic between 20-40 years of age. Detailed history regarding dysmenorrhea, dyspareunia, pelvic pain and subfertility was asked. Abdominal & Pelvic examination was done to find any mass or cyst and tenderness in adnexa or uterine tenderness or mobility, nodularity in POD. TAS/TVS was done in all patients see any endometrioma. Diagnostic Laparoscopy was done under general anesthesia (GA).

Disease was staged using R-AFS. Classification score as shown in picture below. Score 1-5 was classified as stage 1, score 6-15 as stage 2, score 16-40 as stage 3 and above 40 as stage 4.

**THE AMERICAN FERTILITY SOCIETY
REVISED CLASSIFICATION OF ENDOMETRIOSIS**

Patient's Name _____ Date _____

Stage I (Minimal) - 1-5 Laparoscopy _____ Laparotomy _____ Photography _____
 Stage II (Mild) - 6-15 Recommended Treatment _____
 Stage III (Moderate) - 16-40
 Stage IV (Severe) - >40
 Total _____ Prognosis _____

PERITONEUM	ENDOMETRIOSIS	<1cm	1-5cm	>5cm	
	Superficial	1	2	4	
Deep	2	4	6		
OVARY	R. Superficial	1	2	4	
	Deep	4	16	20	
	L. Superficial	1	2	4	
	Deep	4	16	20	
POSTERIOR CULDESAC OBSTRUCTION	Partial	4			
	Complete	40			
OVARY	ADHESIONS	< 1/3 Enclosure	1/5-2/3 Enclosure	> 2/3 Enclosure	
		R. Filmy	1	2	4
		Dense	4	8	16
	L. Filmy	1	2	4	
	Dense	4	8	16	
	TUBE	R. Filmy	1	2	4
		Dense	4*	8*	16
		L. Filmy	1	2	4
	Dense	4*	8*	16	

*If the fimbriated end of the fallopian tube is completely enclosed, change the point assignment to 16.

Additional Endometriosis: _____ Associated Pathology: _____

To Be Used with Normal Tubes and Ovaries

To Be Used with Abnormal Tubes and/or Ovaries

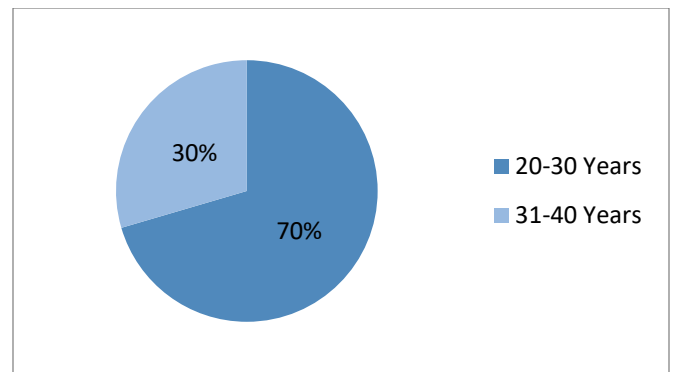


Fig. 2: Prevalence of endometriosis in various age groups.

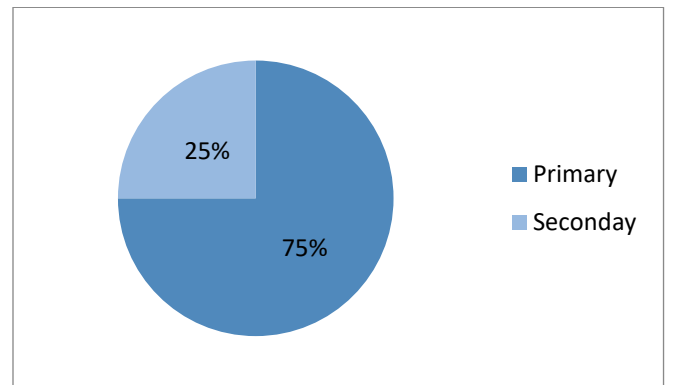


Fig. 3: Distribution of Primary & Secondary subfertility

Removal of lesion done by bipolar cauterization. For endometrioma laparoscopic cystectomy with conservation of ovaries tissue was done and specimen was sent for histopathology. For adhesions adhesiolysis was done. Where surgery was difficult due to dense pelvic adhesion with bowel, laparoscopy was converted to laparotomy. Chormotubation was done in all patients.

RESULTS

Endometriosis was present in 44 patients (27.50) while it was not seen in 116 (72.50%) patient. 31 patients (70.45%) were in age group 20-30 while 13 (29.55%) were in age group 31-40. 33 patients (75%) presented with primary subfertility while 11(25) with secondary subfertility.

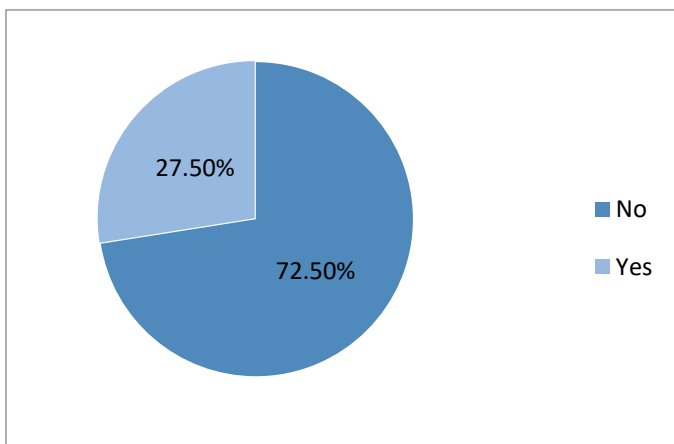


Fig. 1 Prevalence of Endometriosis

Table 1: Distribution of stage of disease according to (R-AFS) classification

Stage	No. of patients	Percentage
Stage 1	12	27.27
Stage 2	06	13.63
Stage 3	15	34.10
Stage 4	11	25.00

Table 2: Chromotubation

Tubal status	No. of patients	Percentage
Bilateral patent tubes	24	54.54
Bilateral block tubes	12	27.27
Unilateral patent tubes	08	18.19

Table 3: Complications of surgery

Name of complication	No. of patients	Percentage
Wound sepsis	01	2.27
Conversion to laparotomy due to bowel adhesion	10	22.72
Injury to Viscera or vessels	00	00

DISCUSSION

The actual prevalence of endometriosis is difficult to find because of a wide range in various studies across the world.⁶ In a study done by Hariharan Valsan, it is 73.33%.⁷ Medical management reduces inflammation, suppresses ovarian

function and causes relief of dysmenorrhea and pelvic pain but it has no role in the management of subfertility. However, it can be used prior to surgery.

The exact mechanism by which endometriomas cause infertility is unknown. Many authors have shown that there is a decreased in ovarian reserve and follicular density in women with endometriomas possibly due to an increase in oxidative stress.⁸ In our study cystectomy was done for ovarian endometrioma laparoscopically and where it was difficult due to dense adhesion with bowel, open laparotomy was done because cystectomy for ovarian endometrioma (size > 3-4cm stage 3 & 4) results in improvements in pregnancy rate as compared with cyst drainage and coagulation.⁹ Moreover, natural conception rate following laparoscopic surgery in infertile women increases. It is 41.9% during the first year after surgery.¹⁰⁻¹¹

Although majority of the patients (54%) had bilateral patent tubes in our study, for those with bilateral tubal blockage, counseling for IVF/adoption was done.

CONCLUSION

The prevalence of endometriosis in patients with subfertility is quite high so a prompt attempt at natural or assisted conception is required after surgical treatment of endometriosis.

Post-surgical, medical treatment is not advocated in sub fertile patient, because these patients have maximum chance of conception in subsequent months immediately after surgery. Delaying conception after surgery was associated with a lower pregnancy rate and a higher rate of recurrence of endometriosis. So, a prompt attempt at natural conception with sufficient time (at least 6 months) is advisable¹⁰.

SUGGESTIONS

There should be a study in patient with chronic pelvic pain so that frequency of endometriosis in those patients can also be found.

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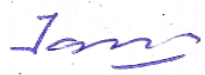

CONFLICT OF INTEREST

Author declared no conflict of interest

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