



THE LAPAROSCOPIC REVELATIONS IN INFERTILITY AND ENDOMETRIOSIS: STUDY OF LAPAROSCOPIC FINDINGS IN INFERTILITY WITH ENDOMETRIOSIS.

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KEYWORDS :

INTRODUCTION:

Endometriosis is defined as the presence of functional endometrial glandular tissue in an ectopic location outside the uterus. Some women may have no symptoms at all—so surgical diagnosis of endometriosis may be coincidental. The associated symptoms can have negative impacts on general physical, mental and social wellbeing. Endometriosis has also been reported in postmenopausal women as well as in men [3,4]. A positive family history represents a six-fold greater risk of having the disorder. Also there is an association between endometriosis and uterine fibroids [5]. It is an estrogen dependent condition with considerable long term morbidity. It manifests between menarche to menopause. It affects 6% to 10% of women of reproductive age, 50% to 60% women and teenage girls with pelvic pain, and up to 50% of women with infertility [1,2].

The most affected sites are the pelvic organs and peritoneum. The appearance of endometriosis is very variable. It can present as small lesions or implants in peritoneal and/or the ovarian surface. Endometrial implants may appear in a number of different ways, including subtle red or white lesions, clear “bubble” lesions, small hemorrhagic cysts (powder-burn, dark brown or bluish or red flame like), or white fibrotic lesions (like scarring) [6]. Endometriosis can present as large ovarian endometriomas.

Approximately 20-25% of women with endometriosis are asymptomatic.[7]. The classic symptoms of endometriosis include dysmenorrhea, cyclical pain in the pelvis and dyspareunia. Other symptoms include difficulty in conception, heavy menstrual bleeding, dysuria, lethargy, intestinal symptoms like cyclic bloating, constipation, diarrhoea. [8].

The fecundity in healthy couples varies from 0.15 to 0.20 per month. Endometriosis lowers the range of fecundity to 0.02-0.1 per month.[9]. It is also associated with a lower live birth rate [10]. Some of the proposed mechanisms can explain the association between endometriosis and infertility which include adhesions leading to distortion of pelvic anatomy, endocrine disruption and ovulatory disorders, cellular and humoral immunity and inflammatory factors, inflammation and irritation of the pelvic organs, etc. [11,12,13]

Diagnosis of endometriosis is surgical and it is based on laparoscopy. Visual inspection is usually adequate to diagnose endometriosis but histological confirmation of at least one lesion is ideal as well. If symptoms fit endometriosis, it is first recommended to treat symptoms with hormonal contraceptives and non-steroidal anti-inflammatory drugs (NSAIDs) [6]. If these measures are not enough, then, according to guidelines given by European Society of Human Reproduction and Embryology (ESHRE), a diagnostic laparoscopy should be performed to confirm the diagnosis [6]. Surgical ablation of endometriotic implants should also be

done at the same time, which has been shown to reduce pain [7].

Our objective was to study diagnostic laparoscopy findings of patients suspected to have endometriosis.

AIMS & OBJECTIVES :

- To study the role of laparoscopy in evaluation of endometriosis in women with primary/secondary infertility.
- To study the therapeutic benefits of laparoscopy with appropriate intervention in patients with endometriosis.

MATERIALS AND METHODS

This is a prospective study to evaluate the role of Laparoscopy in diagnosis and treatment of endometriosis. This study has been conducted in the Department of Obstetrics and Gynaecology, Grant Government Medical College Hospital and Sir J.J. Group of Hospitals. The duration of the study was from July 2022 to December 2022.

Clinical assessment and thorough local and systemic examination of 25 patients was done and relevant findings were recorded with informed consent.

Pre operative investigations: Routine pre op investigations, Serum AMH levels and ultrasonography done.

Indications:

- 1) chronic pelvic pain (not relieved on medications)
- 2) Infertility
- 3) ultrasonography suggestive of endometriosis

RESULTS AND OBSERVATIONS:

Laparoscopy revealed endometriosis in 60% of cases (15 out of 25). The median interval between the onset of symptoms and laparoscopic diagnosis was 1 year. In endometriosis cases, most frequent symptoms described by patients were dysmenorrhea and dyspareunia followed by chronic pelvic pain and lowered fertility. Only 4 patients with endometriosis associated with adhesions complained of bowel and urinary symptoms.

Out of 10 patients, 4 patients were found to have features suggestive of Pelvic inflammatory disease such as tubal wall edema, free fluid in the pouch of douglas, increased hyperemia on the tubal surface. 2 patients were found to have features suggestive of genital tuberculosis, which was later confirmed on HPR. 4 patients were found to have normal findings.

In all cases the stage of the endometriosis was stage 1 : 4 patients, stage 2 :2 patients, stage 3: 5 patients and stage 4: severe disease.

During the laparoscopic procedure, endometriosis was treated in 12 cases in the form of cystectomy, thermal ablation, adhesiolysis and drainage.

Hormonal post operative treatment was given in (123) no of patients

Symptoms	With endometriosis	Without endometriosis
Dysmenorrhea	12	7
Dyspareunia	9	5
Urinary symptoms	2	-
Bowel symptoms	2	-
Chronic pelvic pain	5	6
Infertility	10	3
Irregular/ heavy menses	3	-

Durations of symptoms :

Duration	No of Patients
<6 months	6
6 months to 1 year	12
> 1 year	7

Parity :

Parity	No of Patients
Nulligravida	20
Parous	5

AMH Levels:

AMH levels	With endometriosis	Without endometriosis	TOTAL
<3	5	3	9
>3	10	7	17

In situ Findings (A/c To ASRM Classn)

In situ Findings	No of Patients
ENDOMETRIOSIS	10
Stage 1 (minimal disease)	4
Stage 2 (mild disease)	2
Stage 3 (moderate disease)	5
Stage 4 (severe disease)	4
WITHOUT ENDOMETRIOSIS	10
Tubal edema, hypermia of tubal surface, free fluid in POD suggestive of PID	4
Tubercles on tube, adhesions s/o genital TB	1
Perihepatitis adhesions s/o Fitz Hugh Curtis Syndrome s/o TB	1
Normal findings	4

DISCUSSION:

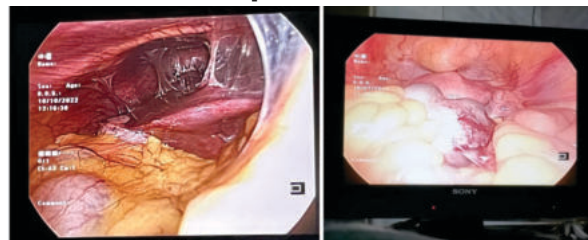
When considering laparoscopic diagnosis of endometriosis, three points should be highlighted: 1) What appears to be endometriosis may or may not be endometriosis, 2) the disease may be invisible, and 3) access to the endometriosis-affected tissues may necessitate additional and prolonged surgery and adhesion removal [14]. For many years, laparoscopy was the gold standard for diagnosing endometriosis. Visual inspection is usually sufficient for diagnosis in clinical practise. However, because lesions vary in size, colour, and location, surgical diagnosis may overestimate or underestimate the diagnosis of endometriosis [15,16].

Based on previous reports, we can speculate that endometriosis was not found in every case for the patients included in our study, and the incidence of endometriosis in our patients may have been underestimated. One reason for the underestimation could be that some laparoscopies were performed during hormonal therapy, and endometriosis may shrink and become invisible during hormonal therapy [14]. The following crucial questions could be raised: Should we be more aggressive in our laparoscopic search for endometriosis? Should we consider laparoscopic peritoneal biopsy in common sites of the pelvis, the lateral pelvic walls, and possibly the bladder and rectum in women with a persistent history consistent with endometriosis?

NO complications were seen in any of the patient during the follow up period.

CONCLUSION

In light of the findings of this study, we should improve the interview process with endometriosis suspects. In minor findings indicating endometriosis, we may also consider consulting pathologists more frequently. The short time between the onset of symptoms and the laparoscopic diagnosis reflects the prompt availability of necessary facilities in specialist health care and/or the surgeons' enthusiasm for laparoscopy. Preoperative serum CA-125 is an important predictor for patients with endometriosis and should be considered when surgical management is suspected, especially if the disease stage, lesion size, and adhesion score are assessed. Finally, laparoscopy appears to be risk-free in cases of suspected endometriosis.



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