

Management of Endometriosis—A Two Years Study at a Tertiary Care Center

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Abstract

Objective: The purpose of this study was to analyze the line of treatment and its outcome in cases of endometriosis presenting with infertility and pelvic pain at a tertiary center having facilities of operative endoscopy and assisted reproductive technology.

Methods: All cases of Infertility and pelvic pain over a period of two years were subjected to laparoscopy. Patients who were diagnosed with endometriosis were classified into categories. Different system of classification was used for patients of Infertility and pelvic pain. A large number of patients were subjected to expectant management. Selected cases underwent IUI, IVF-ET and ICSI. The numbers of pregnancies were recorded in these cases. Patients with pelvic pain were treated with hormonal therapy.

Results: 1038 patients were studied over a period of 2 years out of which 983 presented with Infertility and 55 with pelvic pain. 294 cases of infertility were detected and biopsy proven to be having endometriosis and 20 of the 55 cases of pelvic pain were also detected to have endometriosis. In the infertility group 76 patients were found to have bilateral tubal block. 215 patients were detected to have various grades of lesions but with patent bilateral/unilateral tubes. 6 patients with blocked tubes and 11 patients with patent tube/tubes also were associated with male factor infertility. 88 patients with blocked tubes and/or male factor received treatment with IVF-ET/ICSI. 178 patients underwent ovulation induction and 28 were simply observed. There were 42.8% pregnancies in the observation group, 49.4% in the ovulation induction-IUI group and 45.4% in IVF-ET/ICSI group.

Conclusion: 30% of the cases of Infertility had endometriosis. Following operative endoscopy treatment for all cases, the occurrence of pregnancy was similar in patients who were simply observed and those who received treatment with ovulation induction-IUI. Those with mechanical problems of sperm-egg union are best treated with IVF-ET where facilities exist.

Keywords: Endometriosis, infertility, pelvic pain, IVF, treatment modality.

INTRODUCTION

Endometriosis is defined as the presence of endometrial glands and stroma in extrauterine locations. Most often it is seen in the posterior cul-de-sac and in the adenexal region, but endometriosis has also been diagnosed in the pleural cavity and liver. Endometriosis occurs in about 8 to 10% of women, although the diagnosis is made more often in younger, reproductive age women. Endometriosis is also found more frequently among infertile women; rates from 20 to 70% have been reported. Although the association between endometriosis and infertility is unclear, management of endometriosis has become a component of infertility evaluation and management. The diagnosis of endometriosis is made on the basis of the patient's history and physical findings. Cyclic and chronic pelvic pain, dysperunia, and dysmenorrhea are common symptoms. Adenexal tenderness, adenexal masses, or tenderness/nodularity over the uterosacral ligaments can be suggestive of

endometriosis. The gold standard of diagnosis however, remains to be, the direct visualization of the lesions during laparotomy or laparoscopy followed by histologic diagnosis of biopsy specimen.

METHODS

A study of all patients who underwent laparoscopic evaluation for infertility and pelvic pain during a period of two years was carried out. All cases that are worked up at the Assisted Reproductive Technology center (ART) undergo mandatory laparoscopic and hysteroscopic evaluation. In addition to these cases, some patients also underwent laparoscopic evaluation for pelvic pain.

In patients of infertility in whom endometriosis was found, biopsy of the lesion was done and was supported by positive histopathology. Patients with endometriosis were placed into two broad categories. One with a disease with disruption of

normal pelvic anatomy and blocked tubes and the other with healthy and patent tubes. Patients whose primary complaint was pelvic pain were classified as according to American Fertility Society 1985 classification into minimal mild moderate and severe. During the Laparoscopic procedure fulguration and excision of pelvic involvement of peritoneum and adhesionolysis was done. Ovarian endometriomas were dealt with by drainage and evacuation of cyst contents and fulguration and/or removal of cyst wall. Laparoscopic uterosacral ligament ablation (LUNA) was also done in few cases of pelvic pain. The lesions of all patients were digitally recorded and treatment schedule was individualized as per findings and other factors like therapeutic goal, nature and extent of disease, symptoms, age and overall health. Patients were thereafter either observed or treated with Ovulation induction, IUI, IVF-ET, ICSI, hormones or surgery. Those in whom no further treatment was given were observed for one year. A maximum of six cycles of ovulation induction and IUI were done in the induction group. In patients with blocked tubes and/or male factor problem, a maximum of two cycles of IVF-ET/ICSI were done. Patients with pelvic pain were treated with Danazol, GnRH or surgery.

RESULTS

A total of 1038 cases were analyzed in our study over a period of 24 months. There were 983 cases of infertility and 55 cases of pelvic pain who underwent laparoscopic evaluation. 294 cases of infertility were detected and biopsy proven to be having endometriosis and 20 of the 55 cases of pelvic pain were also detected to have endometriosis.

In the infertility group 76 patients were found to have distorted pelvic anatomy and bilateral tubal block. 215 patients were detected to have various lesions including rectovaginal endometriosis but with patent bilateral/unilateral tubes. Six patients with blocked tubes and 11 patients with patent tube/tubes also were associated with male factor infertility. 88 patients with blocked tubes and /or male factor received treatment with IVF-ET/ICSI. 206 patients were planned to be observed (Expectant management). A large number of patients in this category who were outstation residents did not agree to only observation and were further treated with ovulation induction (178). Only 28 patients were expectantly managed in the true sense with observation. There were 12 pregnancies in the observation group (42.8%), 88 pregnancies in the ovulation induction group (49.4%) and 40 pregnancies in the IVF-ET/ICSI group (45.4%).

In the 20 patients detected to have endometriosis of the pelvic pain group 8 patients were categorized as mild, 9 moderate and 3 severe. 7 patients were treated with Danazol, 11 with GnRH analogs and 2 with surgery (Total abdominal hysterectomy with bilateral salpingo-oophorectomy).

DISCUSSION

Endometriosis is defined as the presence of endometrial tissue at sites outside its normal location in the uterus. This chronic

and usually progressive disease occurs almost exclusively in women of reproductive age. The usual presentation of the disease is pain, infertility and pelvic mass. The pain is classically described as cyclic pelvic pain. There could be dysperunia, dysmenorrhea, dysuria and/or dyschezia. Musculoskeletal pain involving the flanks, low back and thighs is also described. Infertility can occur in all degrees of severity. In moderate and severe disease the problem is caused by adhesions or disruption of normal pelvic anatomy leading to mechanical blockage of sperm-egg union. Minimal and mild disease causes ovulatory dysfunction, oocyte, sperm, or embryo toxicity, abnormalities of the immune system and defective endometrial receptivity in women with endometriosis. Chronic pelvic pain is the commonest symptom which is mainly dysmenorrhea and intermenstrual pain. Dysperunia is due to ovarian, peritoneal or rectovaginal involvement. Acute presentation could be due to hemorrhage or rupture of the cyst. Dysmenorrhea and Dysperunia are more suggestive of endometriosis if the symptoms begin after years of relatively pain-free menses and coitus. The relationship between pain and the stage and site of endometriosis is controversial!

In our study we used Laparoscopic visualization of lesions and histopathology as the standard for diagnosis of Endometriosis. Most patients were laparoscopically debulked of the disease during the time of diagnosis as routine operative laparoscopy is performed at our center. Findings were recorded and later discussed to plan the line of treatment. Patients with Pelvic pain were classified according to AFS classification. The AFS classification was however not used in infertility cases in our study. According to the American Fertility Society Classification of Endometriosis, the disease can be minimal (Stage I), mild (Stage II), moderate (Stage III), or severe (Stage IV). Minimal disease consists of only a few small lesions on the peritoneum or ovary along with some filmy adhesions. More severe cases may involve multiple lesions on the peritoneum, invasive lesions or cysts, and dense adhesions that affect the ovaries, fallopian tubes, GI system, urinary tract, or more distant organs. Endometriosis diagnosed in patients of pelvic pain was mainly due to rectovaginal or peritoneal endometriosis.

CONCLUSION

Endometriosis was found in almost 30% of the cases whose main problem was infertility, and 36% of those with pelvic pain. No patient desiring conception was administered hormonal therapy. One-fourth the number of cases with infertility and Endoscopy had blocked tubes and were taken up directly for IVF-ET/ICSI and 45.4% of these patients conceived. In our study we had comparable rates of pregnancies in the expectant group and those undergoing ovulation induction-IUI. The benefits of the treatment were achieved at the time of laparoscopy itself where most of the disease was addressed in the form of fulguration, excision and adhesionolysis. The relief achieved in those patients undergoing laparoscopy for pelvic pain followed by Danazol or GnRH was also comparable. The treatment with

these drugs should only be reserved for patients whose primary complaint is pain.

BIBLIOGRAPHY

1. American College of Obstetricians and Gynecologists. Endometriosis. Washington, DC: ACOG; 1993. ACOG Technical Bulletin 194.
2. Barbieri RL. Hormonal therapy of endometriosis. *Infertil Reprod Med Clin North Am* 1992;3:187-200.
3. Dmowski WP, Lesniewicz R, Rana N, et al. Changing trends in the diagnosis of endometriosis: A comparative study of women with pelvic endometriosis presenting with chronic pelvic pain or infertility. *Fertil Steril* 1997;67:238-43.
4. Duleba AJ. Diagnosis of endometriosis. *Obstet Gynecol Clin North Am* 1997;24:331-46.
5. Eskenazi B, Warner ML. Epidemiology of Endometriosis. *Obstet Gynecol Clin North Am* 1997;24:235-58.
6. Hull ME, Moghissi KS, Magyar DF, et al. Comparison of different treatment modalities of endometriosis in infertile women. *Fertil Steril* 1987;47:40-44.
7. Parazzini F, Fedele L, Busacca M, et al. Postsurgical medical treatment of advanced endometriosis: Results of a randomized clinical trial. *Am J Obstet Gynecol* 1994;171:1205-07.
8. Revised American Fertility Society classification of endometriosis: 1985. *Fertil Steril* 1985;43:351-52.
9. Schenken RS, Malinak LR. Conservative surgery versus expectant management for the infertile patient with mild endometriosis. *Fertil Steril* 1982;37:183-86.
10. Vercellini P, Crosignani PG, Padini R, et al. A gonadotropin-releasing hormone agonist compared with expectant management after conservative surgery for symptomatic endometriosis. *Br J Obstet Gynecol* 1999;106:672-77.