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Original Research Article

Analysis of symptoms and management modalities of endometriosis in a tertiary care hospital

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ABSTRACT

Background: Endometriosis is a progressive disease characterized by the growth and placement of endometrial tissue outside the uterine cavity. Endometriosis affects 10-15% of all women of reproductive age and 70% of women with chronic pelvic pain. We have aimed to study the demographic factors, symptoms and management of endometriosis. Certain risk factors are discussed which may be helpful in early diagnosis of the same.
Methods: A one year hospital based retrospective study involving detailed medical records of patients presenting with endometriosis between 1st November 2022 and 31st October 2023.
Results: Majority of cases of endometriosis were found in the reproductive age group. Several patients presented with multiple symptoms, of which common ones were pelvic pain, dysmenorrhea, dyspareunia and infertility. Management modalities include medical management using GnRH agonist like injection leuprolide and surgical management techniques involving laparoscopy and laparotomy depending upon the extent of involvement. The most common site of endometriosis was found to be the ovary, while other peroperative findings included distorted anatomy and a concomitant infective focus owing to pelvic inflammatory diseases.
Conclusions: Endometriosis can decrease quality of life due to severe pain, fatigue, infertility. No preventative measures have yet been found. But early diagnosis and management may be extremely helpful in improving the quality of life.

Keywords: Endometriosis, Infertility, Ovarian endometrioma, Pelvic pain, Retrograde menstruation

INTRODUCTION

Endometriosis is defined as the presence of endometrial glands and stroma like lesions outside of the uterus. It is a progressive disease characterized by the growth and placement of endometrial tissue outside the uterine cavity. The lesions can be peritoneal lesions, superficial implants or cysts on the ovary, or deep infiltrating disease. Retrograde menstruation, a feature of the menstrual cycle in women and non-human primates, which is an outflow of the endometrial lining through the patent fallopian tubes into the pelvic space. This retrograde flow, along with potential hematogenous or lymphatic circulation, may result in the seeding of endometrial tissue in ectopic sites. Endometriosis affects 10-15% of all women of reproductive age and 70% of women with chronic pelvic pain. As most women with endometriosis report the onset of symptoms during adolescence, early referral, diagnosis, identification of disease and treatment may mitigate pain, prevent disease progression and thus preserve fertility. Barriers to early diagnosis include the high cost of diagnosis and treatment in adolescent patients and presentation of confounding symptoms such as cyclic and acyclic pain.[1]

Clinical presentation of endometriosis varies in women. Patients often present with symptoms such as intermenstrual bleeding, painful periods (dysmenorrhea),

painful intercourse (dyspareunia), painful defecation (dyschezia) and painful urination (dysuria).[2] Pelvic pain may present before menstruation begins. Often, endometriosis can be asymptomatic, only coming to a clinician's attention during evaluation for infertility. Classification of endometriosis associated pain symptoms have been established by the American Society for Reproductive Medicine (ASRM) based on the morphology of peritoneal and pelvic implants such as red, white and black lesions, percentage of involvement of each lesion should be included.

The objective of this study was to analyse the presentation, diagnosis and management modalities of endometriosis.

METHODS

A one year hospital based retrospective study carried out at department of obstetrics and gynaecology, B. J. medical college and civil hospital Ahmedabad, involving detailed medical records of patients presenting with endometriosis between 1st November 2022 and 31st October 2023. During one year period a total of 25 cases of endometriosis were noted.

Selection criteria

All diagnosed cases of endometriosis were included in the study.

Statistical analysis

The data for all parameters were collected, tabulated, and frequency and percentage were analysed.

The diagnosis of endometriosis was based on detailed clinical history, ultrasonography, MRI (in some cases).

On admission detailed clinical history and clinical examination was done. (1) General examination included vital signs. (2) Abdominal examination for evidence of scar endometriosis or any palpable mass. (3) Per speculum and per vaginum examination for cervical and uterine mobility, presence of palpable mass in fornices, forniceal tenderness, cervical motion tenderness.

After a detailed examination blood was drawn for routine investigations such as complete blood count, liver and renal function tests, coagulation profile, blood grouping. CA-125 was sent in few cases and was found to be elevated. A diagnosis was made intraoperatively and the obtained specimens were sent for histopathological examination and the diagnosis was confirmed.

RESULTS

Majority of cases of endometriosis were found in the 26-30-year age group followed by 31-35-year age group, which are the reproductive age group.

Table 1: Age group distribution- n=25.

Age	Number of patients	Percentage
20-25	4	16
26-30	9	36
31-35	7	28
36-40	4	16
41-45	1	4

Table 2: Presenting symptoms n=25.

Symptoms	Number of patients	Percentage
Pelvic pain	19	76
Dyspareunia and intermenstrual pain	10	40
Dysmenorrhea	10	40
Infertility	8	32
Painful defecation	3	12
Scar endometriosis	6	24

Presenting symptoms consisted of pelvic pain seen in 76% cases while dyspareunia and intermenstrual pain (40%), dysmenorrhea (40%) and infertility (32%) comprised of other common symptoms. 24% cases of scar endometriosis were noted and 12% cases of painful defecation. Several patients presented with multiple symptoms.

Management

Of cases managed laparoscopically, 4 were admitted for diagnostic hysteron-laparoscopy for infertility and were intraoperatively found to have ovarian endometrioma.

3 cases were managed medically using injection leuprolide 11.25 mg (i.m.). Of which 2 cases further required surgical management.

Table 3: Surgical management.

Surgery	Number of patients	Percentage
Laproscopy	7	28
Scar endometriosis excision	5	20
Laprotomy	9	36
Laprotomy f/b hysterectomy	6	24
Laproscopic hysterectomy	1	4

Ovarian endometrioma was found in 60% of cases, bowel adhesions in 20%, rectus muscle endometrioma and intraperitoneal lesions in 16% cases each. In distorted reproductive tract anatomy and concomitant infective focus was found in 8% cases each. While bladder adhesions were found in only one case peroperatively. Multiple findings were noted in almost all patients. These

findings confirm that the most common site of endometriosis is the ovary.

Table 4: Peroperative findings n=25.

Findings	Number of patients	Percentage
Ovarian endometrioma	15	60
Subcutaneous/ rectus muscle endometrioma	4	16
Inraperitoneal lesions	4	16
Bowel adhesions	5	20
Distorted reproductive tract anatomy	2	8
Concomitant infective focus	2	8
Bladder adhesions	1	4

DISCUSSION

Age distribution of endometriosis was mainly seen in the reproductive age group, 26-30 year followed by 31-35 year. The 31-35-year group mainly consisted of patients of scar endometriosis owing to increasing number of caesarean sections.

Common symptoms included pelvic pain, dysmenorrhea, dyspareunia and intermenstrual pain. Almost all patients presented with multiple symptoms. Patients with prior abdominal surgery presented with scar endometriosis (36%) cases. Dyspareunia associated with endometriosis usually is new in onset and most intense with deep penetration immediately prior to menstruation.[3] While painful defecation was noted among 12% patients owing to bowel involvement. No complaints of bladder abnormalities were noted in this study. According to Vercellini et al, the stage of pelvic endometriosis is not always correlated with patient-reported pain symptoms, and a lack of awareness of deep infiltrative endometriosis and extra-pelvic endometriosis may delay diagnosis.[11] According to Chen et al, some women experience recurrent, particularly perimenstrual, changes in bowel habits (diarrhea or constipation), irritable bowel syndromes, and bloody stool implicating the evidence of deep infiltrative endometriosis of the lower gastrointestinal tract. Other women suffering from cyclic dysuria and hematuria have been treated as refractory urinary tract infections or bladder pain syndrome, which can be caused by endometriosis.[12]

For diagnosis ultrasound was the first line imaging modality used. MRI was used for further confirmation of diagnosis. Ovarian endometriomas and scar endometriosis were diagnosed on ultrasound. While abdominal and pelvic lesions required diagnosis by MRI. The definitive diagnosis of endometriosis is done by surgery. There has been a gradual shift towards diagnosing endometriosis on a clinical basis. According to Speroff's clinical gynecology, endometriosis should be suspected in any woman reporting symptoms of cyclic, progressively worsening pain. Furthermore, medical treatment of dysmenorrhea/clinically diagnosed endometriosis certainly is appropriate before considering surgical evaluation and treatment for suspected endometriosis.[3] Levels of CA-125 often are elevated in women with advanced endometriosis, but also during early pregnancy and normal menstruation, and in women with acute pelvic inflammatory disease or leiomyomata. Overall, the serum CA-125 concentration does not have the necessary sensitivity to be an effective screening test for diagnosis of endometriosis.[3,9,10]

Management comprised of medical and surgical techniques. Medical technique included administration of GnRH agonist like injection leuprolide 11.25 mg intramuscular every 3 monthly. 3 cases were managed medically of which 2 further required surgical management. Surgical management comprised of various techniques. Scar endometriosis excision was done in 20% cases, without entering the peritoneal cavity. Laparoscopic management was done in 28% cases, which included diagnostic as well as therapeutic.[5] Cystectomy for ovarian or par-ovarian lesions was done by this technique. Laparotomy was also performed in 36% which was followed by hysterectomy in 24% cases. Histopathology of these adnexal cysts were confirmed the presence of endometriomas. Perop adhesions were quite commonly found and adhesiolysis was easily done in laparotomy approach.

Peroperative findings consisted of ovarian endometrioma in 60% cases suggesting that the most common site of endometriosis are ovaries.[7] Bowel adhesions were found in 20% cases and were easily dealt with during laparotomy, and are often responsible for painful defecation in such patients. Extraperitoneal sites of endometriosis and intraperitoneal lesions such as powder burn lesions were each found in 16% cases. According to Speroff's clinical gynaecologic endocrinology and infertility, histologic examination of excised lesions can confirm surgical impressions and is preferred, but not required, to establish the diagnosis with reasonable certainty.[3] Most of these cases belonged to stage 3 (moderate endometriosis) or stage 4 disease (severe endometriosis).[4]

Distorted reproductive tract anatomy was found in 8% cases and might be a major factor responsible for infertility in these patients.[3,6] According to Schenken et al, pelvic adhesion can also cause anatomical distortion, interrupting the conception process, including oocyte release from ovaries, ovum pickup, and transport through fallopian tubes.[6] According to Speroff's clinical gynecologic endocrinology and infertility, the infertility associated with endometriosis has been attributed to distorted anatomy, inflammation and aberrant endometrial gene expression. Yet, distorted anatomy remains the only single valid explanation for endometriosis impairing fertility.[3] According to Barrier et al adenomyosis, characterized by

the defective junctional zone and perturbed uterine peristalsis, is strongly associated with primary infertility and adverse in vitro fertilization (IVF) outcomes.[5]

Concomitant infective focus found in 8% cases was due to presence of pelvic inflammatory disease in these patients which might have resulted in development of endometriosis in these patients and might contribute to chronic abdominal pain. Elizur et al reported that concurrent endometriosis was diagnosed in 21 (14.2%) of 148 patients with PID or TOA.[7] According to a study by Kobayashi et al the overall, an increasing body of evidence suggests that endometriosis may be associated with an increased risk of incidence, severity, and recurrence of PID, as well as difficulty in treatment selection.[8]

Limitations of this study are that this was conducted at a tertiary centre and most of these cases are an advanced stage of endometriosis. Hence early diagnosis was difficult. Moreover, due to advanced stage of disease surgical management, of which laparotomy was commonly employed.

CONCLUSION

Endometriosis has significant social, public health and economic implications. It can decrease quality of life due to severe pain, fatigue, depression, anxiety and infertility. At present, there is no known way to prevent endometriosis. Since endometriosis is mainly a surgical diagnosis hence early diagnosis usually becomes difficult. Enhanced awareness, followed by early diagnosis and management may slow or halt the natural progression of the disease and reduce the long-term burden of its symptoms, including possibly the risk of central nervous system pain sensitization.

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REFERENCES

1. Parasar P, Ozcan P, Terry KL. Endometriosis: epidemiology, diagnosis and clinical management. Curr Obstet Gynecol Rep. 2017;6:34-41.
2. Chauhan S, More A, Chauhan V, Kathane A, Chauhan Sr VV. Endometriosis: a review of clinical diagnosis, treatment, and pathogenesis. Cureus. 2022;14(9).
3. Taylor HS, Pal L, Sell E. Endometriosis. Section V. In: Speroff's clinical Gyneocologic endocrinology and infertility. First South Asian edition. India: Wolters Kluwer; 2023:1223-1258.
4. Indian centre for endometriosis. American society for reproductive medicine classification of endometriosis. Available from: https://www.endometriosis-india.com/classification-of-endometriosis/. Accessed on 12 November 2023.
5. Barrier BF, Malinowski MJ, Dick EJ Jr, Hubbard GB, Bates GW. Adenomyosis in the baboon is associated with primary infertility. Fertil Steril. 2004;82(Suppl. S3):1091-4.
6. Schenken RS, Asch RH, Williams RF, Hodgen GD. Etiology of infertility in monkeys with endometriosis: luteinized unruptured follicles, luteal phase defects, pelvic adhesions, and spontaneous abortions. Fertil Steril. 1984;41:122.
7. Elizur SE, Lebovitz O, Weintraub AY, Eisenberg VH, Seidman DS, Goldenberg M, et al. Pelvic inflammatory disease in women with endometriosis is more severe than in those without. Aust N Z J Obstet Gynecol. 2014;54:162-5.
8. Kobayashi H. Similarities in pathogenetic mechanisms underlying the bidirectional relationship between endometriosis and pelvic inflammatory disease. Diagnostics. 2023;13(5):868.
9. Barbieri RL, Niloff JM, Bast RC Jr, Schaetzl E, Kistner RW, Knapp RC. Elevated serum concentrations of CA-125 in patients with advanced endometriosis. Fertil Steril. 1986;45:630.
10. Pittaway DE, Fayez JA. The use of CA-125 in the diagnosis and management of endometriosis. Fertil Steril. 1986;46:790.
11. Vercellini P, Buggio L, Somigliana E. Role of medical therapy in the management of deep rectovaginal endometriosis. Fertil Steril. 2017;108:913-30.
12. Chen LH, Lo WC, Huang HY, Wu HM. A lifelong impact on endometriosis: pathophysiology and pharmacological treatment. Int J Mol Sci. 2023;24(8):7503.

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