



Laparoscopic evaluation and prevalence of endometriosis among infertile Kashmiri women

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Abstract

Objective: To determine the prevalence of endometriosis in infertile women.

Methods: The study was conducted in the department of obstetrics and gynecology, Government medical college, Srinagar, Kashmir from August. 2009 to Nov. 2011. Total of 200 infertile women with normal ovulation and normospermic partners were studied.

Results: Among 200 infertile women; thirty nine patients were diagnosed with endometriosis (19.5%) and among infertile patients diagnosed with endometriosis 16 patients (41%) were diagnosed with stage I endometriosis.

Conclusion: Endometriosis with infertility is very common disease in women with prevalence of 19.5%. Laparoscopy remains the preferred technique for diagnosis and staging of endometriosis.

Key words: Endometriosis, Infertility, Laparoscopy.

Introduction

Endometriosis is defined pathologically by the presence of tissue outside the uterus that is histologically similar to endometrium. Endometriosis is a disease, common among women of reproductive age group with very diverse range of presentations that include pelvic pain, dysmenorrhoea, dyspareunia or subfertility and infertility¹. Endometriosis is most commonly found on the pelvic peritoneum but may also be found on the ovaries, rectovaginal septum, ureter, and rarely in the bladder, pericardium, and pleura. Prevalence of endometriosis in general population is difficult to determine and is seen to affect approximately 33% women suffering from

chronic pelvic pain and in 10% of young adults and adolescents with severe dysmenorrhoea, largely estimated by laparoscopic visualization of pelvic organs^{2, 3}. However, the frequency in women presenting with infertility has been reported to vary between 20 to 50 percent^{4, 5}.

Aims and Objectives

To determine the prevalence of endometriosis in infertile women with normal ovulation and normospermic partners at laparoscopy.

Material and methods

This prospective study was conducted in Lalla Ded Hospital, a 500 bedded Associated Hospital

of The Government Medical College, Srinagar, the only tertiary care hospital for Gynaecology and Obstetrics in Kashmir Valley. The study was conducted from August 2009 to November 2011 and a total number of 200 patients were enrolled.

Inclusion Criteria

1. Women in reproductive age group of 18 to 40 years.
2. Presenting with history of primary or secondary infertility.
3. Normal ovulatory cycles.
4. Normospermic partners.

Exclusion Criteria

1. Age < 18 years or > 40 years.
2. History of lower abdominal or pelvic surgeries.
3. History of abdominal/genital tuberculosis.
4. Endometriosis diagnosed in the past.
5. Accidentally discovered pregnancy.

The following data was recorded from studied subjects : general characteristics of the patients including the demographic data, diagnoses, recent surgery especially on lower abdomen or pelvis, duration of marriage, menstrual history, previous fecundability, use of contraceptives, any concomitant illness, history of ATT intake, history of associated symptoms as dysmenorrhoea, pelvic pain and dyspareunia. Laboratory measures such as Haemogram, KFT and LFT were performed. In addition folliculometry was conducted with the help of USG to establish normal ovulation. The women presenting with primary and secondary infertility had their partners' semen analyzed for normospermia. Women with normal ovulatory cycles and normospermic partners were subjected to a diagnostic laparoscopy to look for the cause of infertility, especially prevalence of endometriosis .

Laparoscopic staging based on the revised American Fertility Society Scoring for Endometriosis (AFS) which divides Endometriosis into four categories of severity was used to stage the disease. Stage I (Minimal) Few

endometrial implants most often in the cul-de-sac. Stage II (Mild) Endometrial implants affecting one or both ovaries. Stage III (Moderate) Moderate levels of endometriosis with implants in several reproductive areas and in one or both ovaries. Stage IV (Severe) Widespread endometriosis implants throughout the pelvic area. Dye test was performed to establish tubal patency.

Statistical Analysis

Statistical associations were determined using SPSS version 17.0 software using various analytical tests.

Results and observations

Out of the 200 patients enrolled in the study, 39 Patients showed evidence of endometriosis on laparoscopy making a percentage of 19.5, while 161 patients (80.5%) had no evidence of endometriosis. The mean age of patients in the study group was 26.9 ± 3.2 years.

The majority of patients presented with primary infertility (86%) while only 14% patients presented with secondary infertility. Complaints were noted in addition to infertility in 8.5% cases with chronic pelvic pain, 3.5% dysmennorrhoea, 1.5% with oligomennorrhoea and 1% with dyspareunia.

Frequency of each stage of endometriosis were found to be 16 (41%) for stage I, 12 (30.8%) for stage II, 7 (17.9%) for stage III and 4 (10.3%) for stage IV endometriosis.

Table 1, Distribution of patients with and without endometriosis

	n	percentage
endometriosis present	39	19.5
endometriosis absent	161	80%
total	200	

Table 2, Frequency and percentage distribution of stages of endometriosis

stage of endometriosis	n	percentage
stage I	16	41
Stage II	12	30.8
Stage III	7	17.9
stage IV	4	10.3

Discussion

Endometriosis remains an enigma despite the many years Elapsing since its description by simpson. The true prevalence of endometriosis in general population cannot be determined as it is impractical to subject asymptomatic general population to surgical procedure.

The present study found that the prevalence of endometriosis in infertile patients was 19.5%. In similar studies conducted to test the impression that endometriosis and infertility are associated, Naseer-u-din et al ⁶; Khawaja UB et al ⁷; Mahmood TA et al ⁸; and Strathy JH et al⁹; found that the prevalence of endometriosis in infertility was 17.9%, 16.8%, 21% and 21% respectively which is in conformity to our study. However, Topalski et al¹⁰; and Fabio Parazzini et al¹¹; in their studies evaluated the prevalence of endometriosis in infertility which was found to be 26% and 30% respectively which was different from our study. This difference in observation may be because of difference in sample size.

The mean age at presentation of 26.9 ±3.2years, the low incidence of disease on either extreme of ages and higher prevalence of endometriosis in women of reproductive age in our study was in congruence with the studies conducted by Saghar S et al¹²; and Khawaja UB et al⁷; where mean age of the patients was 28.6± 5.1 years and 29± 5.3 years respectively.

In our study 86% of the patients presented with primary infertility, while only 14% patients presented with secondary infertility. Our observations were in conformity with the observations in the studies conducted by Jaun

Balasch et al⁴; where 79% of the patients presented with primary infertility and 21% with secondary infertility and Khawaja UB et al⁷; where 74.6% of the patients presented with primary infertility and 25.4% patients presented with secondary infertility. Our observations were also similar to observations in the studies conducted by Saghar S et al¹²; and Haider G et al¹³. Other observations made in our study group in addition to infertility were pelvic pain which was the most frequent present in 8.5% of the patients, followed by dysmenorrhoea (3.5%), menorrhagia (2%), oligomenorrhoea (1.5%) and dyspareunia (1%). These observations were also noted in the study conducted by Khawaja UB et al⁷; and Haider G et al¹³; albeit with different frequencies. The highest frequency of endometriosis at the time of presentation was in stage I of disease (41%) suggesting an early presentation in majority of cases, similar observations were made by Khawaja UB et al⁷; Meuleman C et al¹⁴.

Conclusions

Endometriosis with infertility is very common disease in women with prevalence of 19.5%.

Laparoscopy remains the preferred technique for diagnosis and staging of endometriosis.

References

1. Appleyard TL, Mann CH, Khan KS et al. Guidelines for the management of pelvic pain associated with endometriosis: a systematic appraisal of their quality. BJOG 2006; 113:749-57.
2. Guo SW, Wang Y et al. The prevalence of endometriosis in women with chronic pelvic pain. Gynecol Obstet Invest 2006; 62:121-30 1. Allaire C. Endometriosis and infertility: a review.J Reprod Med. 2006 Mar; 51(3):164-8.
3. Harel Z et al. Dysmenorrhea in adolescents and young adults: etiology and management. J Pediatr Adolesc Gynecol 2006; 19:363-71.

4. Balasch J, Creus M, Fabregues F, Carmona F, Ordi J, Martinez-Roman S et al. Visible and non-visible endometriosis at laparoscopy in fertile and Infertile women and in patients with chronic pelvic pain: a prospective Study. Hum Reprod 1996; 11:387-91.
5. Farquhar CM et al. Extracts from the "clinical evidence". Endometriosis. BMJ 2000; 320:1449-52.
6. Naseer-ud-Din, Ataullah Khan and Nudrat Illahi. Prevalence and presentation of endometriosis in patients admitted in Nishtar Hospital, Multan JAMC Vol. 12 No. 3, 2000.
7. Urooj Bakht Khawaja, Ameer Ali Khawaja, Saqib Ali Gowani, Sana Shoukat, Sana Ejaz, Farzana Nawaz Ali, Javaid Rizvi, Fauzia Haq Nawaz Frequency of endometriosis among infertile women and association of clinical signs and symptoms with the Laparoscopic staging of Endometriosis (JPMA 59:30; 2009).
8. Mahmood TA, Templeton A. Prevalence and genesis of endometriosis. Hum Reprod 1991; 6:544-9.
9. Strathy JH, Molgaard CA, Coulam CB, Melton LJ 3rd. Endometriosis and infertility: a laparoscopic study of endometriosis among fertile and infertile women. Fertil Steril. 1982 Dec; 38(6):667-72.
10. Topalski-Fistes N, Bujas M, Pjević M, Vejnović T. [Infertility and Endometriosis]. Med Pregl. 1997 Jan-Feb; 50(1-2):15-7.
11. Fabio Parazzini, Prima Clinica et al. Endometriosis: Prevalence and Anatomical distribution of endometriosis in women with selected gynaecological conditions: results from a multicentric Italian study. Hum. Reprod. (1994) 9 (6): 1158-1162.
12. Saghar Salehpour et al. Evaluation of Diagnostic Visual Findings at Laparoscopy in Endometriosis. Iranian Journal of Fertility and Sterility. Vol 1, No 3, Nov-Dec 2007, Pages: 123-126.
13. Exacoustos C, Zupi E, Carusotti C, Rinaldo D, Marconi D, Lanzi G, et al. Staging of pelvic endometriosis: role of sonographic appearance in Determining extension of disease and modulating surgical approach. J AmAssoc Gynecol Laparosc 2003; 10:378-82.
14. Meuleman C, Vandenabeele B, Fieuws S, Spiessens C, Timmerman D, D'Hooghe T. High prevalence of endometriosis in infertile women with normal ovulation and normospermic partners. . Fertil Steril. 2009 Jul; 92(1):68-74.