ENDOMETRIOSIS AND INFERTILITY - AN OVERVIEW

K. JAYAKRISHNAN • SHEILA BALAKRISHNAN • K. RADHAKUMARI

SUMMARY

Out of 238 laparoscopies performed, there were 51 cases of Endometriosis giving an incidence of 21.4%. 37.2% of patients were asymptomatic. Surgical pelviscopy done in mild cases of endometriosis yielded 36.3 pregnancy rate, and 30% pregnancy rate in moderate cases. Conservative Laparotomy done for severe endometriosis resulted pregnancy in only 4.2% of cases. More than 75% of severe cases had adhesions in POD or tubal adhesions attributing to poor surgical outcome.

INTRODUCTION

There is an increase in the laparoscopically proven cases of Endometriosis which attended the Infertility clinic at SAT Hospital, Medical College, Trivandrum during the year 1988-90. This study attempts to evaluate the diagnosis and management of the disease with special emphasis on pelviscopic surgery.

INCIDENCE

Out of the 238 laparoscopies performed for infertility cases during the period, there were 51 cases of Endometriosis i.e. 21.4%. Among these 26 i.e. 51% did not have any positive pelvic findings and it was purely a laparoscopic diagnosis. There is a constant relationship with age being maximum in late twenties followed by early thirites which is in confirmity with other reports. The majority were married 3 years or more. Symptomatology : On questioning it was found that 37% were asymptomatic In clinical practice the majority of the cases are not 'classical' and it is seen to be a disease of clinical contrasts i.e. those with the maximum symptoms were not necessarily the most severe and vice versa. The commonest symptoms was congestive dysmenorrhoea.

Pelvic findings suggestive of the disease were seen in 49%. The commonest was tenderness nodularity of the cul de sac which is said to be classical sign of the disease. 30% of the patients had combinations of clinical findings

Dept. of Obst. & Gynec., SAT Hospital & Medical College, Trivandrum, Kerala.

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Table I

	No.	%
Asymptomatic	19	37.2%
Congestive dysmenorrhoea	20	39.2
Backache	13	25.5
Dyspareunia	12	23.5
Menstrual irregularities	10	19.6
Abdominal pain	9	17.6

Table II

Pelvic findings

	No.	%
Clinically suspected	25	49
Cul de sac Nodularity	12	23.5
Fixed retroversion	9	17.6
Bilateral adnexal mass	7	13.7
Unilateral adnexal mass	3	5.9
Vaginal nodule	1	1.9

Diagnostic Laparoscopy and Staging of Endometriosis

Prior to Laparoscopy, all had a complete infertility investigatory profile. Laparoscopy was done with the aim of diagnosis and assessment of the extent of disease to rule out associated pathology and whenever feasible with the idea of pelviscopic surgery in mind. Laparoscopy was conducted under GA with double puncture and a thorough inspection of all the pelvic organs was done along with chromotubation. 21.4% showed the presence of Endometriosis.

Staging was done by the method introduced by Acosta in 1977 and was found that 29% were mild, 24% moderate and 47% were severe.

Chromotubation showed bilateral block in 4 and unilateral block in 10 cases. There were 40 cases of ovarian involvement (bilateral in 62% and unilateral in 38%). Endometriomas were the commonest leision followed by surface inplants and periovarian adhesions (14%). In 23 cases, ovaries were adherent to the uterus, cul de sac or uterosacrals.

Table III

Acosta's Staging

	No.	%
Mild	15	29%
Moderate	12	24%
Severe	24	47%

Table IV

Sites of endometriosis

	%
Ovaries	78.4%
Posterior Cul de sac	52.9%
Uterosacrals	35.3%
Uterine surface	25.5%
Ovarian and round ligaments	9.8%
Vaginal nodule	2%
Fallopian tubes	11.8%
Peritubal adhesions	17.6%

ASSOCIATED PATHOLOGY

PCOD and fibroids were quite a common accompaniment. Hyperprolactinaemia was seen in 6% and anovulation in 8%.

MANAGEMENT OF ENDOMETRIOSIS

The three broad lines of management were (a) Medication alone (b) Laparoscopic surgery (c) Laparotomy depending on the extent of the disease. Whenever medication is mentioned

Table V

Pelvic findings

	No.	%
PCOD	6	12%
Fibroid	10	20%
Hyperprolactinaemia	3	6%
Anovulation	4	48%

as far as possible Danazol was given 400-600 mg daily for 6 months. Due to obvious reasons, (Kistner 1975) Norethisterone had to be given in few cases and oral contraceptives in 2 cases.

Out of 15 (29%) cases with mild endometriosis, Laparoscopic surgery alone was performed in 9 cases. In 2 cases post-operative Danazol was given.

Out of the 12 (24%) moderate cases laparoscopic surgery with post-operative Danazol was alone in 10 cases and laparotomy in 2 cases (4%).

In 24 (47%) patients with severe Endometriosis, there were 7 drop outs and another 4 dropped out after taking Danazol for 6 months just prior to laparotomy. Of the remaining 14 cases laparoscopic surgery was done only in one case and rest underwent laparotomy.

LAPAROSCOPIC SURGERY

In the initial period, laparoscopic surgery was not being done but after 6 months it became a routine in most of the mild and moderate cases. Operative Laparoscopy was done in 22 out of 51 cases. It was done in 11 mild, 10 moderate and 1 severe case.

In the mild cases, electro-coagulation of implants and in moderate cases electro-coagulation along with adhesiolysis was done. Aspiration of small endometrioma and puncture of small cyst was done in 5 cases.

Out of 22 cases of which operative laparoscopics were done, 7 conceived (ie 33.3%). Of these 4 were mild and 3 moderate cases of Endometriosis.

Laparotomy was done for 15 cases, all of which excepting 3 were severe. There was only one conception of these 15 cases, 9 had post-operative medication and 3 cases had both pre-as well as post-operative medication. Associated wedge resection was done in 5 cases, myomectomy in one, vaginal nodule excision in one case and round ligament plication in seven cases.

PREGNANCY OUTCOME

There were 9 conceptions out of 51 cases giving an overall fertility rate of 17.6%. Among the 15 cases with mild endometriosis 4 conceived after operative laparoscopy and 1 with Danazol alone. All the 3 cases of moderate disease conceived after laparoscopic surgery and post operative medication. 1 patient with severe endometriosis conceived following unilateral adnexal removal. 2 patients had

Table VI

No.	Management	Total	Mild	Mod	Severe
1.	Laparoscopic Surgery	9	9	—	—
2.	Laparoscopic Surgery + Medication	13	2	10	1
3.	Medication only	3	3	—	4
4.	Laparotomy	3	1	2	—
5.	Laparotomy + Post oper. medication	9	—	—	9
6.	Pre + post oper. medication	3	—	—	3

Table VII

Laparoscopic Surgery

Stage	Procedure	No treated	Conception
Total		22	7 (33.7%)
Mild	Ablation 9	11	4
	Ablation + 2 Medication		(3.3%)
Moderate	Adhesiolysis + Ablation + Medication	10	3 (30%)
Severe	- do =	1	Nil

Table VIII

Laparotomy

Total	Mild	Moderate	Severa
15	1	2	12
Ovarian Repair		Total	
Unilateral - 4		7	
Bilateral - 3			
Uni-adnexal removal		1	
Uni-adnexal removal + Contralateral adnexal repair		3	
Adhesiolysis / Cauterisation		4	

threatened abortion but later reached term.

Table IX

Stage	No	Pregnancy	Rate
Mild	15	5	33.3%
Moderate	12	3	25%
Severe	24	1	4.2%
Total	51	9	17.6%

DISCUSSION

Among the 238 patients undergoing Diagnostic Laparoscopy as part of infertility evaluation, 51 patients (21.4%) were identified as having pelvic endometriosis during a three year period of study 1988-90. Mild degree (Stage I) was diagnosed in 15 (29%) moderate disease (stage II) in 12 (24%) and severe degree stage III) in 24 (47%).

In 19 (37.2%) cases the disease was asymptomatic. Pelvic findings suggestive of disease was seen in 49%. The commonest

symptom was congestive dysmenorrhaea which was seen in 20 cases (39.2%).

The commonest site for endometriosis were ovaries (78.4%). There were 40 cases of ovarian involvement (Bilateral in 62% and unilateral in 38%). Endometriomas were commonest leisons followed by surface implants and periovarian adhesions.

MILD ENDOMETRIOSIS

Among the 11 subjects treated with endoscopic fulguration, 4 conceived giving a conception rate of 36.3%. We also observed that expectant management of mild endometriosis yield a low pregnancy rate of 20% (2/10 cases conceived).

However, the results of Butler et al (1984) who have employed Danazol alone is quite disappointing (pregnancy rate of 28%). Buttram et al (1979) reported a high pregnancy rate of 73% for surgery alone which further enhanced to 85% when Danazol was added.

MODERATE ENDOMETRIOSIS

There have been 10 subjects with moderate endometriosis treated by surgical laparoscopy. This included adhesiolysis, fulguration of implants, aspiration of chocolate cysts peritoneal lavage and hydrofloatation.

Conception rate for surgical pelviscopy in moderate endometriosis has been 3/10 patients (30%). Post-operative Danazol has been given in a dose of 400 to 600 mg for a period of 3-6 months in those patients with residual endometriosis.

SEVERE ENDOMETRIOSIS

Even though surgical pelviscopy is possible in selected group of severe d.sease only 1 patient in our series underwent operative pelviscopy. Laparotomy was done in 12 cases of severe endometriosis. There was one conception. 9 subjects had post-operative medication and 3 subjects had both pre-as well as post-operative medication 7 (56%) subjects had ovarian enucleation (Unilateral - 4, Bilateral - 3), 1 had unilateral adnexal removal, 3 (24%) had unilateral adnexal removal plus contralateral adnexal repair and 1 subject had adhesiolysis and fulguration. The only conception occured in patient with unilateral adnexal removal.

Post-operative Danazol was given for period of 6-9 months in most of the cases.

The results of laparatomy for severe endometriosis has not at all been impressive.

Ovarian lesions as single pathology when surgically corrected given excellent results which declines to one half if peritoneal adhesions of POD are present or tubal adhesions are present (Rajan R. 1991).

Buttram (1979) advocates Unilateral Salpingo oophrectomy if affection is purely unilateral.

Adhesions in pouch of Douglas, Buttram 1979 advocates less aggresive approach to dense adhesions as long as tubes and ovaries are untouched.

The result of conserative surgery for severe endometriosis is 40% (Buttram) 33.00% (Acosta and Buttram 1977) 45.50% (Malinak 1980) 56% (Dmowski 1987) and 39.30% (Olieve and Haney 1986).

Thus endometrosis defies standard protocols and remains a disease of uncertainities.

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