ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 06, pp.33493-33495, June, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

COMPARATIVE STUDY OF ROLE OF LAPROSCOPIC FULGRATION AND LOW DOSE DANAZOL THERAPY FOR MINIMAL TO MODERATE ENDOMETRIOSIS IN CASE OF INFERTILITY

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ARTICLE INFO

Article History:
Received 24th March, 2016
Received in revised form
17th April, 2016
Accepted 15th May, 2016
Published online 30th June, 2016

Key words:

Endometriosis,
Fulgration,
Danazole,
Infertility.

ABSTRACT

Aims and Objective: To study the role of laproscopic fulgration and Low dose danazol therapy for minimal to moderate endometriosis in case of infertility followed by comparision of both therapy.
Materials and Methods: The present cross–sectional study was conducted in the department of obstetrics and gynecology SN Medical college Agra. Over the period from Dec2010 to Nov 2012. Symptomatic women (n=50) of age group 20-39 yrs coming to gynecology OPD were selected for study group. The study group was subjected to detailed history, physical examination laboratory test, ultrasound examination, laproscopy. Then 25 patient were allotted for laproscopic fulgration and 25 for danazol treatment.
Result: In our study out of 50 patient that transvaginal sonography we found that 10%of patient have cyst <2cm size and 20% have >2cm size, rest 70% have normal scan. On laproscopy 52% of patient have red lesion, 16% have bluish black lesion, 20% have yellow brown lesion rest 22% have no findings. On danazol therapy pelvic pain and dysmenorrhoea was relieved in 64% and 52% conceived. On laproscopic fulgration symptom was relieved in 69% and 60% was conceived.
Conclusion: Based on this study it can be concluded that choice of therapy depend on age of patient, duration of infertility, physical findings, goal of surgery, experience of surgeon, availability of resources. In this study result was comparabile.

Citation: Dr. Aruna Goyal, Dr. Upendra Bharadwaj, Dr. Dilaver and Dr. Nikhil, 2016. "Comparative study of role of laproscopic fulgration and low dose danazol therapy for minimal to moderate endometriosis in case of infertility", *International Journal of Current Research*, 8, (06), 33493-33495.

INTRODUCTION

Endometriosis is a disease in women of reproductive age group characterized by the presence of endometrial gland and stroma outside the uterus causing pain and infertility. (Speroff 6th edition) The prevalence of Asymptomatic endometriosis is 1-7% in women serving elective sterilization, 12-32% among women of reproductive age group with pelvic pain, 9-50% in infertile women and approximately 50% among teens with chronic pelvic pain or dysmenorrhoea (Hooghe *et al*., 1989) the overall prevalence of endometriosis in reproductive aged women probably is between 3% and 10%. Endometriosis is strongly associated with infertility between 20-40% infertile women have the disease. The overall prevalence of endometriosis is greater in infertile women than in fertile women. The multiple effect of danazol produces a high androgen and low oestrogen environment that does't support the growth of endometriotic tissue and the amenorrhea that is produced prevents the new seeding of implants from uterus into peritoneal cavity. (Arnold *et al*., 1996) Fulguration is a procedure that involve using a high voltage electric current to destroy tissue.

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Aims and Objective

To study the role of laproscopic fulgration and danazol therapy for endometriosis in case of infertility followed by comparision of both therapy.

MATERIALS AND METHODS

The present cross–sectional study was conducted in the department of obstetrics and gynecology SN Medical college Agra. Over the period from Dec2010 to Nov 2013. Symptomatic women (n=50) of age group 20-39 yrs coming to gynecology OPD were selected for study group. The study group was subjected to detailed history, physical examination

laboratory test, ultrasound examination, laproscopy. Then 25 patient were allotted for laproscopic fulgration and 25 for danazol treatment. After analyzing the data the result was compared.

RESULTS

Women in study groups were between 26-35 yrs. Mean age in both group A and B was (28+-10). In both group patient of primary and secondary infertility was found. Most of the women in study were nullipara (48%). pelvic pain and dysmenorrhoea were the most common symptom. In group A normal TVS findings were found in 64% of cases. Endometriotic cyst <2 cm size in 12% of cases and endometriotic cyst >2 cm size in 24% of cases. In group B normal TVS findings were found in 76% of cases. Endometriotic cyst <2 cm size in 8% of cases and endometriotic cyst >2cm size in 16% of cases. In both group majority of patients have normal TVS findings. In group A, normal laproscopic findings were found in 44% of cases. Red flame lesions in 20% of cases, petechial lesions in 12% of cases, bluish black in 12% of cases, glandular lesion in 4% of cases, yellow brown in 8% of cases. In group B red flame lesions in 44% of cases, petechial lesions in 12% of cases, bluish black in 12% of cases, glandular lesion in 12% of cases, yellowish brown in 12% of cases. In group A, after danazol therapy associated symptoms were relieved in 64% of cases. In group B, after laproscopic fulgration associated symptoms were relieved in 60% of cases. In group A, 52% of cases were conceived and 36% of cases were not conceived and 12% were lost to follow up. In group B, 60% of cases were conceived and 32% of cases were not conceived and 8% were lost to follow up.

Table 1. Distribution of patient according to profile

Patient profile	Group A (danazol)	GroupB (Laproscopic fulgration)
Mean age(years)	28.6yrs	27.6yrs
TYPE OF INFERTILITY		
Primary	12(48%)	11(44%)
Secondary	13(52%)	14(56%)
Socioeconomic status	Class3	Class3
MENSTRUAL PATTERN		
Normal	8(32%)	12(48%)
Menorrhagia	12(48%)	9(36%)
Polymenorrhagia	5(20%)	4(16%)

Table 2. Distribution of patient according to Tvs finding

TVS findings	Group-A (Danazol Therapy)		Group-B (Laproscopic Fulgration)	
	No.	**%**	**No.**	**%**
Normal	16	64%	19	76%
Endometriotic cyst < 2 cm	3	12%	2	8%
Endmetrotic cyst > 2 cm	6	24%	4	16%
Total	**25**	**100%**	**25**	**100%**

Table 3. Distribution of patient according to Laproscopic finding

Laproscopic findings	Group A (Danazol therapy)	Group B(laproscopic fulgration)
	n(%)	n(%)
Normal	11 (44%)	0(0%)
Red lesions :	9 (36%)	17(68%)
Bluish black lesions	3(12%)	5(20%)
Yellow brown lesions	2(8%)	3(12%)

Table 4. Distribution of patient according to symptom relieved after Laproscopic fulgration and Danazol therapy

Symptoms pelvic pain, dysmenorrhoea	Group-A (Danazol Therapy)		Group-B (Laproscopic Fulgration)	
	No.	**%**	**No.**	**%**
Relieved	16	64%	15	60%
Not relieved	2	8%	4	16%
Normal (No associated symptoms)	7	28%	6	24%
Total	**25**	**100%**	**25**	**100%**

P=>0.70

Table 5. Distribution of Patient according to Laproscopic fulgration and Danazol Therapy

Pregnancy rate	Group-A (Danazol Therapy)		Group-B (Laproscopic Fulgration)	
	No.	**%**	**No.**	**%**
Conceived	13	52%	15	60%
Not conceived	9	36%	8	32%
Lost to follow up	3	12%	2	8%
Total	**25**	**100%**	**25**	**100%**

P=>0.80

Table 6. Result of danazol treatment in various study

Study	Improvement in associated symptom	Pregnency rate
Greenblatt RB	75%	50%
Dmousk WP	70%	60%
Present study (group A)	64%	52%

Table 7. Results of laparoscopic fulguration in various studies

Study	Pregneny Rate
Hasson *et al*	75%
Nowroozik *et al*	60.8%
Present study (group B)	60%

Table 8. Result of layproscopic fulgration and danazol therapy in various Study

Study	Pregnency Rate	
	Danazol Treated	Laproscopic Fulgration
Guziek *et al*	91(74%)	133(68.3%)
Present Study	13(52%)	15

DISCUSSION

After danazol therapy symptoms (pelvic pain, dysmenorrhoea) were relieved in 64% of cases and in Group B symptoms were relieved in 60% of cases. In group A(danazol) 52% of cases were conceived and in group B(laproscopic fulgration) 60% of cases were conceived. In a study done by Greenblatt (1980) dysmenorrhoea and pelvic pain was relieved in 75% of cases and pregnancy rate was achieved in 50% of cases. In another study done by Dmouski (1982) pelvic pain and dysmenorrhoea was relieved in 80% of cases and pregnancy was achieved in 70% of case. Result of fulgration were comparable to study done by Hasson *et al*. (1992) and Nowroozik *et al*. (1983) Laproscopic fulgration done by Hasson *et al* and Nowroozik *et al.* pregnancy rate was achieved in 78% and 60.8% of cases respectively and in present study after laproscopic fulgration 60% pregnancy rate was achieved. In a comparable study done by Guzik *et al*. 74% pregnancy rate was achieved in danazol treated group and 68.3% pregnancy rate was achieved in fulgration group. Based on this discussion it can be concluded that results are comparable for danazol therapy and laparoscopic fulgration. But the choice of therapy depends on history, patient age, time of infertility physical findings, goals of surgery and other factor of infertility.

Danazol therapy is generally used on patients when:

- The patient with endometriosis and pelvic pain does not desire an immediate pregnancy.
- Some of the implants are deep and small and not visible on laparoscopy, danazol therapy is good for these patient.
- Cost effective treatment is needed.
- Danazol is good for patients for unexplained infertility 8.
- If all endometriotic lesions are superficial surgery is much easier and more effective.
- Experienced laparoscopic surgeon needed for this form of therapy.
- As hormonal therapy cause suppression of ovarian function, ovulation not occur. Menses return four to six week after stopping drug so it cause delay in treatment of infertility.

Conclusion

Endometriosis is an ovarian steroid dependent disease. Endometriosis is a multifocal disease. Some of the implants are small and deep and thus not visible or laparocopy 9. This fact limit the effectiveness of any sort of laparoscopic treatment aimed at totally eliminating endometriosis. If all endometriotic lesion were superficial surgery would be much easier and more effective. Laparoscopic surgeries are not affordable by many patients because of its cost as well as fear of surgery especially in countries like ours.Low dose Danazol therapy is good choice to such patient.Low dose danazol therapy does not have major side effect.

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