

**PREGNANCY OUTCOME IN INFERTILE WOMEN
WITH RESISTANT POLYCYSTIC OVARIAN DISEASE
TREATED BY LAPAROSCOPIC OVARIAN
ELECTROCOAGULATION**

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SUMMARY

Polycystic Ovarian Disease causing infertility is a challenge in treatment and achieving conception. In this retrospective analysis, we have studied the response of 29 patients of resistant polycystic ovarian disease to laparoscopic electrocoagulation. 8/29 patients became pregnant, 16/29 ovulated and 13/29 had regular cycles. Although our results showed a comparatively lower pregnancy rate than reported by other workers it seems to be a worthwhile procedure before attempting expensive gonadotrophin therapy in our patients.

INTRODUCTION

Stein and Leventhal in 1935 described Polycystic Ovarian Syndrome as a symptom complex associated with anovulation. This problem is one of persistent anovulation with a spectrum of

etiologies and clinical manifestations which has puzzled gynaecologists and endocrinologists for many years. Ovulation induction with clomiphene citrate has been the standard therapy for PCOD causing infertility. Here, we present a simple and cost-effective surgical procedure for cases resistant to clomiphene citrate.

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Accepted for Publication on Nov' 96*

MATERIAL AND METHODS

The results of 29 patients who were treated with laparoscopic ovarian electrocoagulation from October 1993 to June 1995 for resistant PCOD were analysed.

Twenty one patients were residents of Bangalore while 8 were from outside. The patients were aged between 20 to 32 years, the duration of married life being 1 to 10 years.

Fifteen patients came with primary infertility, 7 with secondary infertility and 7 with oligomenorrhoea. The menstrual cycle length varied from 15 to 120 days.

Diagnosis of Resistant PCOD was made by :-

1. The characteristic ultrasonography picture - the 'Necklace pattern' of multiple peripherally arranged follicles in bilaterally enlarged ovaries.

2. Hormonal assay which showed either a reversal of S.FSH/LH ratio or raised S. testosterone levels.

3. No follicular development on ovulation induction with upto 100mg of clomiphene citrate given for at least 3 cycles.

The procedure done was a 3-port laparoscopy under General anaesthesia during the proliferative phase of the cycle (either natural or following progesterone withdrawal).

The 3 ports were :-

1. A subumbilical 10mm optical port for the laparoscope

2. A right suprapubic midinguinal 5mm port for the atraumatic grasping forceps

3. A left suprapubic-midinguinal 5mm port for the monopolar cautery needle.

The procedure involved -

i) Careful examination of pelvic organs to confirm the diagnosis, to detect any

other pelvic pathology and to check for tubal patency.

ii) Electrocauterisation of polycystic ovaries with the monopolar cautery needle — 5 to 15 punctures, 2 to 4mm deep and 3mm apart were made per ovary. No electrocauterisation was done near the mesoovarium to avoid bleeding or devascularization.

iii) 250ml of Ringer's lactate was left in the pouch of Douglas to cool the ovaries and hence prevent post operative adhesion formation.

iv) Laparoscopy wounds were closed with No. 3-0 Dexon. The average duration of surgery was 45 minutes and it was done as a day care procedure.

Follicular imaging was started from the next cycle and timed intercourse advised on rupture of follicle.

RESULTS**ASSOCIATED DISEASE**

Gynaecological	
Endometriosis	5
Fibroids	3
Blocked Tubes	2
Absent Tube on the side	1
Others	
Hypothyroidism	1
Pituitary Adenoma	1
Oligospermia	2
Azoospermia	1
Gall Stones	1
Pregnancy Outcome	
Pregnant	8 (7 IU, 1 Ectopic)

Not pregnant	4
Less than 3 months follow up	14
Lost to follow up	3

COMPLICATIONS

We encountered 2 complications;
1 ectopic pregnancy
1 wound infection.

Details of Pregnancy

1st Cycle	6
Pregnant IIIrd Cycle	1
Vth Cycle	1

DISCUSSION

The exact mechanism of ovulation following ovarian electro-cauterisation is not yet established. The various hypotheses are :-

1) Reduced intraovarian androgen concentration due to drainage of follicles
2) Reduction of Inhibin caused by destruction of the dominant follicle

3) Increased exposure of follicles to gonadotrophins by the increased intraovarian blood flow.

Cycle Outcome

Ovulation	16/29	55.2%
Cycle Regulation	13/29	44.3%

OVULATION AND PREGNANCY RATES AFTER DIFFERENT METHODS OF LAPAROSCOPIC TREATMENT OF PCOD

Author	Year	No. of pts.	Method	Ovulation Rate %age	Pregnancy Rate %
Daniell & Miller	1989	85	Laser	70	56
G. Gjonnaess	1984	35	Electro coagulation	92	80
Armer et al	1990	21	Electro Coagulation	81	52
Naether et al	1993	104	Electro Coagulation	86	70
Present Study	1995	29	Electro Coagulation	55	28

A review of literature shows an ovulation rate of 70-86% and a pregnancy rate of 52-70% in the treatment of PCOD by laser or electrocoagulation. Our study has lower rates probably because, a) We surgically treated only cases of resistant PCOD

b) 13 of our patients had other problems also and have been included in statistical analysis; of whom only 3 conceived.

c) 14 patients did not follow up regularly for longer than 3 months.

CONCLUSION

Ovarian electrocauterisation has a significant role in clomiphene citrate resistant cases of PCOD especially as an ancillary procedure in an indicated diagnostic laparoscopy in patients with infertility.

It would be a worthwhile procedure before attempting expensive gonadotrophin therapy.

Careful evaluation using controls and longer follow-ups are required before definitive conclusions are reached.

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