



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2017; 3(3): 594-598  
www.allresearchjournal.com  
Received: 01-01-2017  
Accepted: 02-02-2017

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## Laparoscopic investigation of infertility in females of western Rajasthan

**Dr. Ritu Agarwal, Dr. Eti Mantri, Dr. Navneet Agarwal and Dr. Mukesh Kumar**

### Abstract

**Aims and objective:** This study help clinicians to clinch to exact etiological diagnosis by adapting the most relevant investigative procedure and to contemplate the most rational therapy in treating the female infertility in western Rajasthan.

**Material and method:** The study has conducted on 500 patients of age group 19 -40 at the department of obstetrics and gynecology, Umaid hospital attached to SNMC, Jodhpur, Rajasthan, India and Vasundhara hospital and fertility centre, jodhpur. History has been taken and all relevant fact has been recorded. Investigation was done with laparoscopy to look abnormality in fallopian tube, endometrium and ovaries.

**Result:** In present study maximum infertile female (47%) belong to age group of 19 to 25, their mean age was 27+/- 1.17, that is maximum fertile period of life.

36% belonged to group between 26 to 30 years, with mean age of 27+/-1.35.

15% belonged to group between 31 to 35 years, 33.3+/-1.36.

2% were between 36 to 40 years with mean age 38+/-1.49.

**Conclusion:** Laparoscopy is reliable examination as first line study in the work – up for infertility to distinguish normal uterus, from those with altered morphology that require further studies.

**Keywords:** Investigation, infertility, laparoscopy, hospital, morphology

### Introduction

Infertility is as old as human race. Greek, Egyptians and ancient cultures all had different remedies. Ranging from payers and sacrifice to indigenous drugs for treatment. Even today such remedies are practiced in various uneducated committees. Childlessness is generally a tragedy to married women. It causes martial upset as well as personal unhappiness and ill health.

“Infertility is a disease of reproductive system defined by failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse” ....(WHO – ICMART).

### Infertility Etiology

Globally between of 50-80 couples are fertile (WHO, Geneva 1994). According to Delhi IVF infertility affects as many as one in six couples in India. Currently 8-10 million infertility couples are estimated to be in India (Adapted from United Nations Population Fund). Infertility is often a combination of male and female factors and most couples experiencing infertility consider it to be a “Couple” problem. The prevalence of primary infertility in India is given as 3% (Adapted from United Nations Population Fund).

The present study deals with only female primary infertility.

- In western Rajasthan Primary Infertility is on Increase.
- Male and Female Factors are equally answerable.
- The problem of infertility is on increase due to urbanization, pollution, stress, chemical exposure, competitiveness, career orientation, late settlement in life etc.
- Common causes of infertility in Western Rajasthan

Tuberculosis Tobacco (common in male) consumption, PID (pelvic Infection Diseases) in rural area common in female, Early marriage, Polycystic ovaries, Carrier Orientation – stress,

Hormonal Imbalance, Endometriosis – common in young Girls and trend of changing food habit.

**Aims and Objectives**

Considering the increasing incidence of infertility in Western Rajasthan the present study has been undertaken to find out the common etiology factors related to infertility in females Special emphasis was given on anatomical defects of female genital tract.

**Material and method**

- **Total number of cases:** 500 females
- **Age of subject:** 19-40 years (at the department of Obstetrics and Gynecology, Umaid Hospital attached to SNMC, Jodhpur and Vasundhara Hospital and fertility Centre, Jodhpur).
- **Duration of infertility:** 1-15 years
- Detail History has been taken
- Investigation done with laparoscopy to look abnormality in fallopian tube, endometrium and ovaries.

**Laparoscopy**

**Defination:** Laparoscopy is a minimally invasive procedure used as a diagnostic tool and surgical procedure that is performed to examine the abdominal and pelvic organs. Laparoscopy is commonly used in gynecology to examine the outside of the uterus, fallopian tubes, and ovaries. A small incision is made just below the naval and a cannula or trocar is inserted into incision to accommodate the insertion of the laparoscope. Laparoscopes have integral cameras for transmitting images during the procedure, to visualize the internal anatomy. Video and Photographic equipment are also used. After the laparoscopic diagnosis and treatment are completed, the Laparoscope, Cannula and other instrumentation are removed and incision is sutured and bandaged.

**Observations**

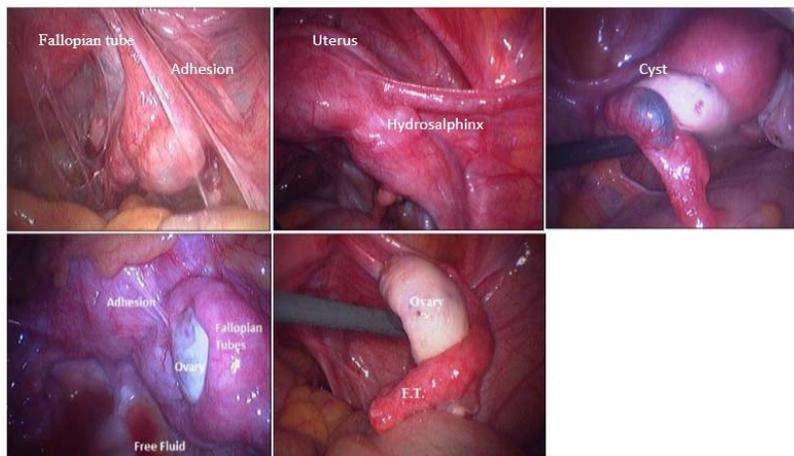
Various factors are analyze: - Uterine factor, Tubal factor, pelvic inflammatory diseases and Endometriosis.

**Uterine factor:** It is cause of infertility. The Anatomic uterine abnormalities include congenital malformations intrauterine adhesion, endometrial polyps and congenital anomalies of the uterus.



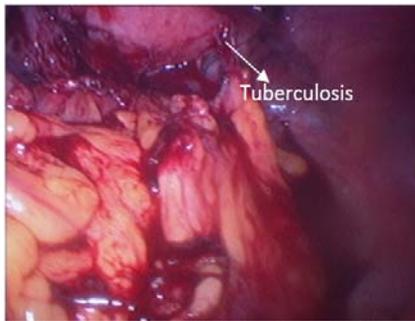
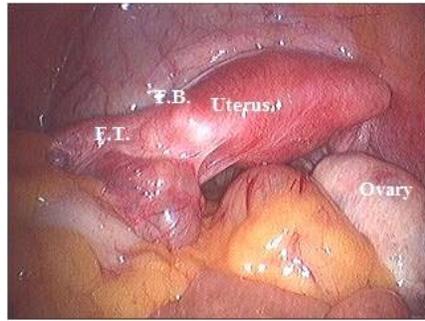
**Tubal Factor:** The most common cause of infertility. It affects approximately 30 to 35% of infertile couples (miller

1999). Causes OD tubal factors are tubal damage, blockage, pelvic inflammatory disease and adhesion.



**Pelvic inflammatory diseases:** This is becoming a growing world – wide problem. Primarily it involves the fallopian tubes. PID may be caused by Tubercular bacilli or bacteria

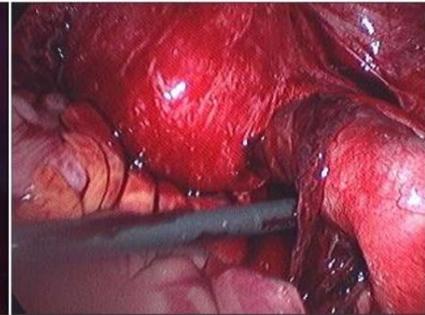
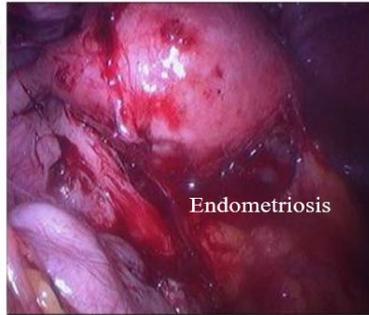
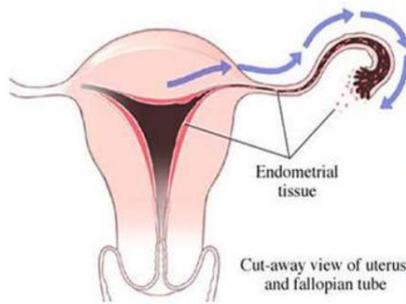
e.g. Chlamydia Trachomatis, or by use of an Intrauterine (IUD).



**Endometriosis**

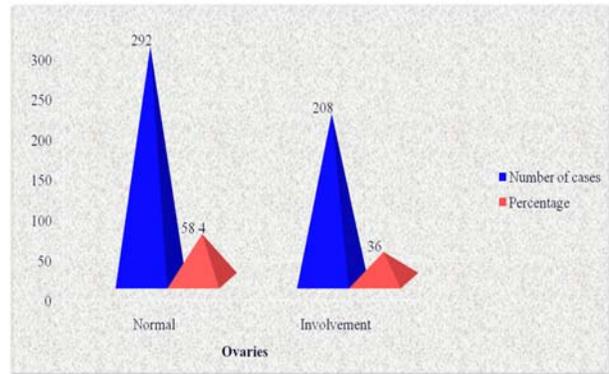
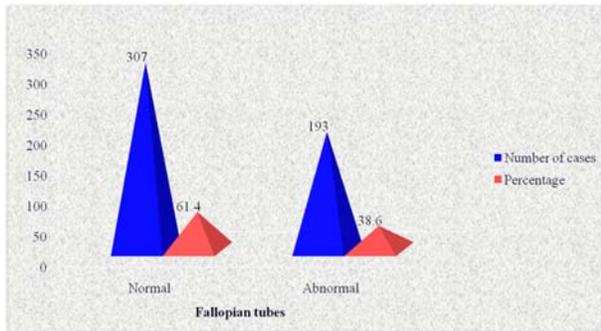
Endometrial tissue is usually found only in the lining of the uterus. Sometimes, it grows outside the uterus in abdominal and pelvic region. This is called as Endometriosis.

Endometriosis is strongly associated with infertility affecting 10-15% women’s in their reproductive years (Melis *et al* 1994).



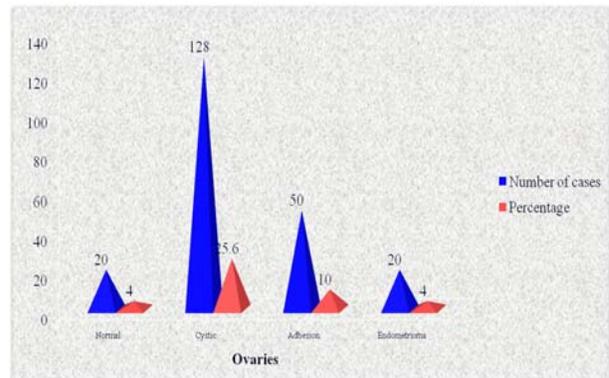
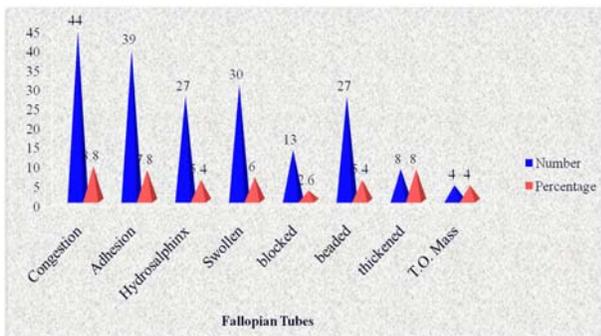
All observations have been summarized and statically evaluated are presented in the form of tables and graphs. **Laparoscopic Findings of Fallopian Tubes**

**Laparoscopic Findings of Ovaries**

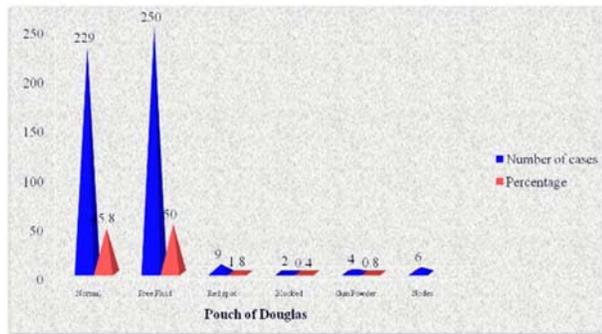


**Laparoscopic Findings of Fallopian Tubes (Type of Tubal Involvement)**

**Types of Ovaries Involvement in Laparoscopy**

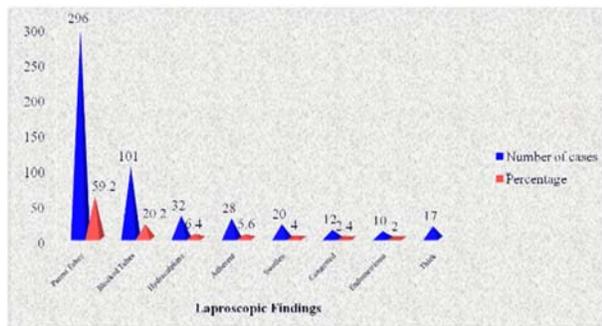


### Laparoscopic Findings of Pouch of Douglas



### Summary of Laparoscopic Findings

S.no	Findings	Number	Percentage
1	Patient tubes	296	59.2%
	Unilateral	38	7.6%
	Bilateral	254	50.8%
	With G. Koch	4	0.8%
2	Tubal Block	101	20.2%
	Unilateral	51	10.2%
	Bilateral	46	9.2%
	With G. Koch	4	0.8%
3	Hydrosalpinx	32	6.4%
	Unilateral	4	0.8%
	Bilateral	28	5.6%
	Adherent	28	5.6%
5	Swollen	20	4%
6	Congested	12	2.4%
7	Endometrioma	10	2%
8	Thickened	17	3.4%



### 5. Result and discussion

Results were compared with work of various other scientists and the comparison was thus tabulated

#### Age

Age of the patient in the present study varied from 19 to 40 Years. Maximum number of infertility women (47%) belongs to the age between 19 to 25 years. This is statistically significant because that is the most fertile period of life.

#### Duration

Duration of infertility was calculated in primary infertility women from the time of marriage. The duration of primary infertility in majority of cases ranged between 1 to 5 years.

- Musich J.R. (1982) [9] Sholapurkur (1985) [10] Anila (1987) also reported similar results as that of ours.
- Dutta S. (2007) [4] in her study in west Bengali Population also observed the same.

### Family History

- On analyzing the family history of infertility females percentage of obesity and diabetes is more common cause of infertility.
- Kusakari M. (1990) [7] suggested that pregnancy rate was lower in obese women.
- Grodsten, Goldman and Cramer (1994) [6] concluded that the risk of ovulatory infertility is highest in obese women.
- Thus, weight reduction is appropriate treatment for women with obesity – related endocrine derangement, menstrual irregularity and infertility.

### Tuberculosis

- The presence of tuberculosis in western rajasthan population was observed significantly and 11.2% subjects under study were tubercular.
- Sweeney (1962) [11] and Emembolu J.O (1993) [5] demonstrated suggestive findings of tuberculosis by laparoscopy.

### Laparoscopy

Most of the workers reported significant abnormalities in the laparoscopic findings like tubal blockage ; hydrosalpinx ; congestion ; endometrium ; adhesion ; swollen and thickening.

- In comparison to their study we also find these abnormalities.
- Wood's (1983), Sholapurkur (1985) [11] Srinivasan (1985) Mennon (1987) [8] Andres (1991) [1], Dutta S (2007) [4], Zulfo G & Edin I (2008) [12] also reported these differences.

### Summary & conclusion

- Infertility is growing health problem in many countries of the world.
- It affects relatively large number of couples both globally as well as in India.
- The present study was undertaken to find out the common etiologic factors pertaining to primary infertility in female which is more common than secondary infertility, with special emphasis on anatomical defects of female genital tract responsible for infertility.
- Result were recorded in a systematic manner.
- In this study I have tried to consolidate the major causes of primary infertility in western Rajasthan. These data can be further compared clinically by using modern techniques.

### Reference

1. Anders Nyobe Andersen, Zhou Yue, Fan Jing. Karsten Petersen Implantation: Low implantation rate after *in vitro* fertilization in patients with hydrosalpinges diagnosed by Ultrasonography. Human Reproduction, 1991; 6(5):659-664.
2. Arronet GH, Eduljee O, Brien JR. Nine year's survey of fallopian tube dysfunction in human infertility, Diagnosis abd therapy, Fertil steril. 1969; 20:903.
3. Badway ZAS, San filipollo J. Daignostic laparoscopyin reproductive biology and pelvic pain-A review of 171 patients: reproductive Endocrinology and fertility. 1982, 129.

4. Dutta sumita, Guha ranjit. A clinic- Anatomical study on the common etiological factors pertaining to primary infertility in females using some common investigation procedure, J. Anat soc. India. 2007; 56(2)14-17.
5. Emembolu JO, Anyanwu DO, Ewa B. Genital tuberculosis in infertile women in Northern Nigeria. West Afr J. Med. 1993; 12(4):211-2.
6. Grodstein F, Goldman MB, Cramer DW. Body mass index and ovulatory infertility, Epidemiology. 1994; 5(2):247-50.
7. Grodstein F, Goldman MB, Cramer DW. Body mass index and ovulatory infertility. Epidemiology, 1994; 5(2):247-50.
8. Kusakari M, Takahashi K, Yoshino K, Kitao M. Relationship between the delayed – reaction type of LH-RH test and obesity in sterile women ovulatory disturbances: a preliminary report, Int J fertile. 1990; 35:1:14-6:21-2.
9. Mennon KMJ, Ayers JWT, Birenbaum DL. Luteal phase dysfunction in endometriosis; fertile Steril. 1987; 47:925-929.
10. Musich JR, Behrman SJ. Infertility laparoscopy in perspective: review of five hundred cases. Am J. Obstet. Gynecol. 1982; 143:292-295.
11. Sholapurkar ML, Sardesai SP, Nalgirkar AJ. A onetime laparoscopic procedure for evaluation of infertility women. J Obstet Gynec India. 1985; 535:571.
12. Sweeney WJ. Fertil & Steril. 1962; 13:113.
13. Zulfo Godinajak, Edin Idriz begovic. Should diagnostic laparoscopy in infertile women. Bosnian Journal of basic medical sciences. 2008; 8(1):44-47.