

# Evaluation of Female Infertility by Laparoscopy in a Secondary Level Infertility Care Centre

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### Abstract:

**Introduction:** infertility is regarded as an upsetting and difficult life experience for some women with elevated levels of anxiety & depression. Laparoscopy is the gold standard in diagnosing various aspects of female subfertility as well as treatment of some of them at the same time. Secondary level infertility care centre includes all those can manage every aspects of problems of infertility except IVF-ET and other advance aspects of management.

**Objective:** To find out the role of laparoscopy in the management of infertile women in a secondary level infertility care centre.

**Study Design:** Prospective cross sectional study.

**Setting:** Fertility care centre, Department of Obst. & Gynaecology Dhaka Medical College Hospital from January 2018 to June 2018.

**Methods:** During the study period 328 infertile women attended infertility outdoor. Among them 48 were admitted for diagnostic laparoscopy.

**Results:** Out of forty eight women 26 (54%) had primary infertility, 22 (46%) had secondary infertility. The findings were PCOS in 22% of cases, endometriosis in 14%, PID in 15% cases, unexplained in 20%, fibroid uterus in 6% cases congenital anomaly of uterus in 1% and others in 22%.

**Conclusion:** Laparoscopy is the gold standard in evaluating infertile women. Some women would have a correctable problem found at laparoscopy that would not be discovered with any other fertility screening tests like endometriosis.

### Key Words:

Laparoscopy, Secondary level infertility care centre.

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### Introduction:

Laparoscopy is perceived as a minimally invasive surgical technique that both provides a panoramic and magnified view of the pelvic organs and allows surgery at the time of diagnosis. It also allows the fertility doctors to see abnormalities that might interfere with women's ability to conceive. The most common problems of infertility are endometriosis, polycystic ovaries, pelvic adhesions and uterine fibroids. The procedure will allow the diagnosis of infertility problems that would otherwise be missed. For example- a woman who has severe endometriosis may not

be identified by using ultrasound. A woman with mild to moderate endometriosis can only be identified using surgery such as laparoscopy. Another problem that can only be identified through this procedure are pelvic adhesions. Adhesions can't be seen with ultrasound, X-ray's or CT scans. Adhesions can interfere with the ability to conceive if they make it more difficult for the ovum to get into the fallopian tube at the time of ovulation. Generally laparoscopy should be reserved for couples who have already completed a more basic infertility evaluation including assessing ovulation, ovarian reserve, ultrasound and hysterosalpingogram for the female and semen analysis for the male. If a woman had a history of severe pelvic infection, pelvic TB, or a rupture appendix or any pelvic surgery, this would increase the likelihood that she may have pelvic adhesions and therefore more likely to benefit from laparoscopy. It has got an advantage of taking greater information as compared to hysterosalpingography and ultrasonography. It is the gold standard in diagnosing various aspects of female

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subfertility as well as treatment of some of them at the same time. Secondary level infertility care centre includes all those centres that can manage every aspects of problems of infertility except IVF-ET and other advance aspects of infertility management.

**Objectives :**

**General objective :**

- To find out the role of laparoscopy in the management of infertile female in a secondary level infertility care centre

**Specific objective :**

- To find out the cause of infertility in female
- To give therapeutic measure at the same time wherever feasible
- To refer the complicated cases to tertiary level infertility centre.

**Study Design :**

This was a prospective cross sectional observational study.

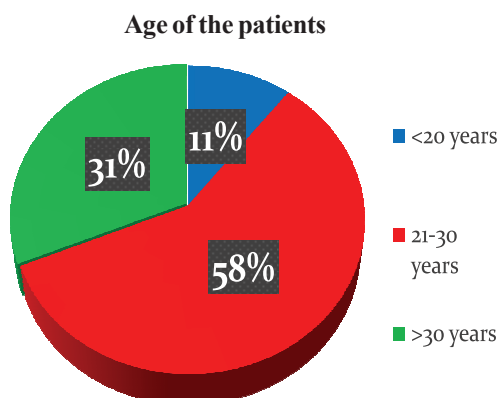
**Setting :** Fertility care centre ,a secondary level infertility centre in the department of Obstetrics and Gynaecology ,Dhaka Medical College Hospital

**Study period :** From January 2018 to June 2018 for a period of six months.

**Methods :**

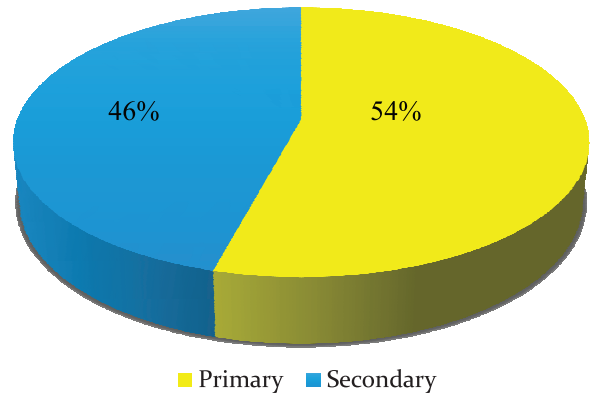
During the study period 328 infertile couple attended at outdoor of fertility care centre .Among them 48 women were admitted for diagnostic laparoscopy after evaluating them by baseline investigations.They were further evaluated by laparoscopy and discharged on the following day with appropriate treatment, advice and follow up.

**Results :**



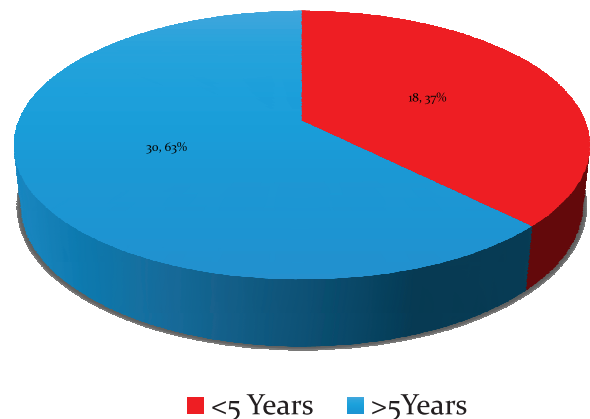
Most of the patients are between the age group of 21-30 yrs

**Types of subfertility**



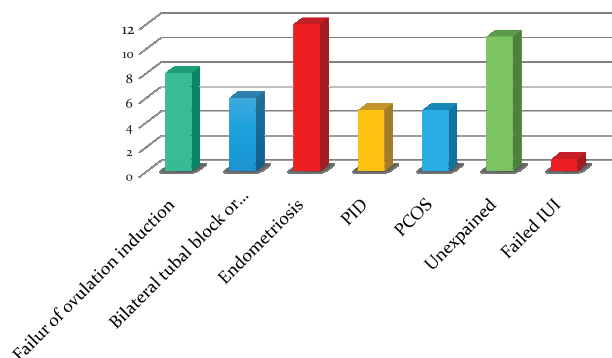
Among 48 women 26 (54%) had primary subfertility and 22 (46%) had secondary subfertility.

**Duration of subfertility**

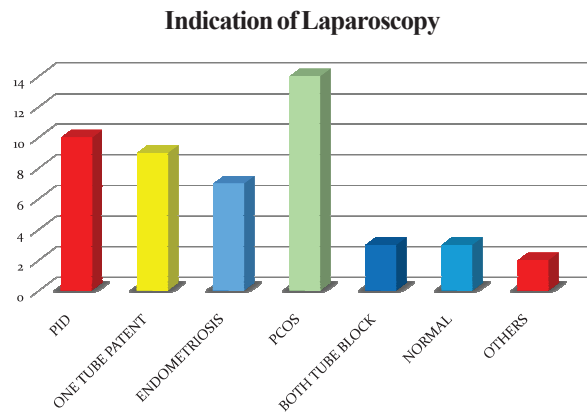


Duration of subfertility was more than 5 years in most of the cases.

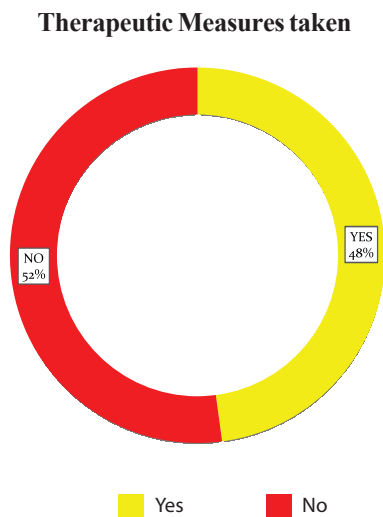
**Indication of Laparoscopy**



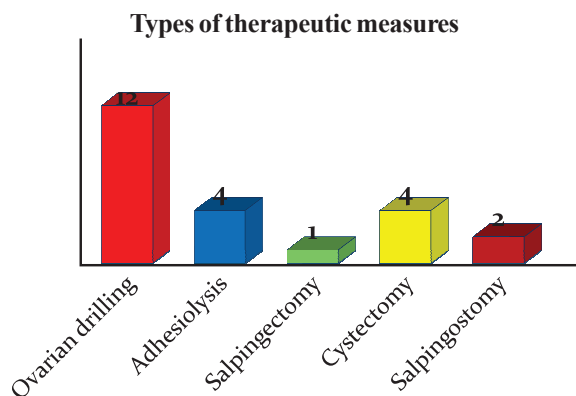
Most of the cases were admitted for diagnostic laparoscopy clinically suspicious to have varying degree of endometriosis, PCOS, bilateral tubal block found at Hysterosalpingography or saline infusion sonography or those failed to conceive for a variable period of time inspite of having ovulation following ovulation induction.



After performing diagnostic laparoscopy majority were found to have PCOS. A good number of patients also show features of varying degree of endometriosis, PID, unilateral or bilateral tubal block.

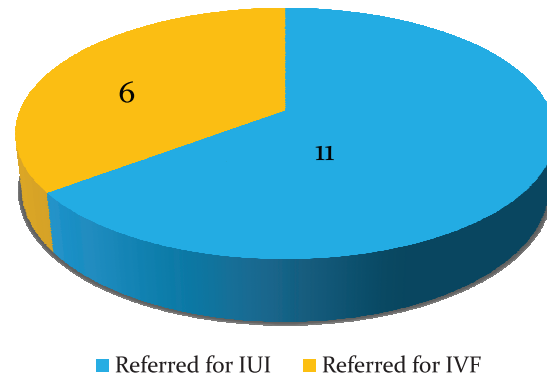


Along with diagnostic approach a good no. of patients (48%) were treated at the same time .



During the diagnostic laparoscopy Ovarian drilling was done for PCOS .For varying degree of endometriosis adhesiolysis. chocolate cyst cystectomy was

done.Salpinxectomy performed in some case diagnosed of having hydrosalpinx.



17 cases were referred for advanced management. 11 cases for IVF in tertiary centers and 6 cases for IUI in our set up.

Among the 48 cases of infertility 5 cases conceived successfully after doing laparoscopy. Two of them were diagnosed of having PCOS and ovarian drilling were done at the time of laparoscopy , two were cases of endometriosis for which adhesiolysis and cystectomy done and one unexplained infertility.

**Discussion:**

Infertility is a worldwide problem affecting 8-12 percent couple (50-80million) during their reproductive lives<sup>2,3</sup>. Laparoscopy allows the surgeon to visualize tubal patency & integrity, endometriosis & pelvic adhesions<sup>2,4</sup>. In our study a total no of 48 infertile women were included.Out of 48 women 26(54%) had primary infertility, 22(46%) had secondary infertility. The result is consistent with the study of DivyeshN.Panchal,Ami Shah<sup>2</sup>. The majority (62%) of them were in the age group between 21-30 years.31% were >30years of age, 10% were <20 years of age.According to Kanal Sharma’s study maximum cases of infertility (45%) were in the age group of 21-25 years & 35%cases were in the age group of 26-30years<sup>5</sup>.It was observed in our study that the majority of patients 30(63%) have infertility duration of >5 years & 18(37%)have infertility duration of <5 years.In our country the duration of infertility is more in comparison to developed countries as women of developed countries are educated and empowered than ours.so they seek for medical advice earlier.

In most of the cases indication of laparoscopy was endometriosis (25%). Unexplained causes were 23%. Other causes are failure of ovulation induction(17%),bilatered tubal block on hysterosulphingography (16%), PCOS (10%), PID (10%), failed IUI (2%). But among the findings of laparoscopy most of the cases were PCOS (29%),

endometriosis (15%), one tube patent (19%), both tube block (6%), normal (6%). Other causes were pelvic TB (2%),perovarian cyst (2%). These findings were almost similar to the study conducted in Thailand by Sinawat et al.<sup>6,2</sup> Five cases among the 48 cases conceived successfully after doing laparoscopy.

#### **Conclusion:**

Laparoscopy is the gold standard in evaluating infertile women particularly with history of pelvic inflammatory disease,ectopic pregnancy,pelvic surgery ,chronic pelvic pain or having bilateral tubal block in hysterosalpingography.Certainly some women would have a correctable problem found at laparoscopy that would not be discovered with any other fertility screening tests like endometriosis.A significant number of women especially PCOS who are refractory to ovulation inducing drugs can benefit from ovarian drilling and in others diagnosed as having tubal block in Hysterosalpingography can be evaluated properly by laparoscopy at the same time.

#### **Limitation of the study :**

We lack the facility of Hysteroscopy in our center.Thats why we missed to evaluate some cases that might have intracavitary lesion like submucous fibroid, polyp or adhesions.

#### **Recommendation:**

Our study revealed that many of our patients have taken several ovulation inducing drugs for several years without proper evaluation. At one way it reduces the ovarian reserve which ultimately causes negative impact on fertility treatment and there is also little chance of ovarian malignancy in the future. So if these patients are early referred from primary caregiver they can be properly evaluated at secondary care centre preferably by laparoscopy. Specific diagnosis and plan of treatment can be done earlier which definitely will improve their chance of fertility.

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