



THE BENEFIT OF LAPAROSCOPY IN SUBFERTILITY

*Dr. Iqbal Abed Fahad, Muna Sami Rahman Abu- Rageef and Kareema Ali Abbas AL- Jadiri

Wasit Health Directorate, IRAQ

ARTICLE INFO

Article History:

Received 10th September, 2018
Received in revised form
28th October, 2018
Accepted 06th November, 2018
Published online 26th December, 2018

Key Words:

Laproscopy, Subfertility,
Diagnostic.

ABSTRACT

Background: The inability to conceive is one of the most distressing conditions for a female. It not only makes the female feel incomplete but also the social taboos attached are phenomenal. Lately there has been an increase in the incidence of subfertility due to various medical, social and economical reasons. To assess the various causes giving rise to subfertility the surgeon has to subject the patient to a battery of investigations ranging from non invasive procedures to surgical interventions like diagnostic and therapeutic laparoscopy. Laparoscopy has currently become the gold standard for assessing the female infertile patient. **Aim of study:** To determine the benefit of laproscopy in subfertility. **Methods:** This is a cross sectional study for 32 female patient with subfertility who undergone laproscopy. their ages between 18-40 years old with mean age 29.06. The study was conducted over a period of six months from the 9th of Nov. /2016 to the 2nd of May /2017. the data were included age , sex , causes of subfertility and history of previous surgery. **Results:** Half of patients were under 30 years old .most of patients were suffering from PCOS 14(43.6%). 6(18.8%) of patients had history of surgery results in pelvic adhesion. **Conclusion:** laproscopy has a major diagnostic and therapeutic role in subfertility.

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Citation: Cinthya Lorena Bezerra Sarmanho et al. 2018. "Realistic simulation as a teaching strategy learning in basic health care", *International Journal of Development Research*, 8, (12), 24615-24617.

INTRODUCTION

One of the important aspects of the life of a female is to conceive and procure children. But 15-20% of the females in the reproductive age group are unable to experience this important role (Penzias, 1987). The terms coined for this inability to conceive after one year of unprotected regular intercourse are subfertility or sub fertility (Hammond, 1987 and Taylor, 2003). The causes of subfertility are broadly classified as male factors, female factors and unknown or combined. During the investigations in the female it is mandatory to rule out the pathology of the genital tract as the cause for subfertility as it is one of the leading causes for failure to conceive. Subfertility can be primary" in which case the woman has never "conceived" before or "secondary" when there is prior conception irrespective of the outcome of the pregnancy (Yu, 2003; Mohapatra, 2004 and Olajide, 2010). In the past the female genital tract disorders were evaluated by means of hysterosalpingography. This was done in an indirect way by using contrast medium instilled per vaginuum and then assessed under fluoroscopic control to observe the spill of the

coloured medium from the tubal end into the pelvic cavity. The modern era of management of female genital tract factors has seen a change for the better. Advent of minimal access procedures have redefined the evaluation and treatment of infertile female particularly with tubal causes. Laparoscopy is perceived as a minimally invasive surgical technique that provides both a panoramic and highly magnified view of the tubes and allows surgery at the time of diagnosis only. With the improvement in optics and standardization of laparoscopy the results have been encouraging so far. This review aims at bringing forth the technique and various uses of laparoscopy in patients who have female factor as the cause of subfertility.

Aim of study:

To determine the benefit of laproscopy in subfertility.

MATERIALS AND METHODS

This is a cross sectional study for 32 female patients with subfertility who undergone laproscopy. Their ages between 18-40 years old with mean age 29.06. The study was conducted over a period of six months from the 9th of Nov. /2016 to the 2nd of May /2017. The data were included age, sex, causes of

subfertility and history of previous surgery. A questionnaire was designed by our teacher .Consent was taken from College of Medicine/Wasit university. Data were entered into Statistical Package for Social science (SPSS) program version 19 for Windows 7. Quantitative variables were summarized by finding mean and qualitative variables were summarized by finding frequencies and percentages.

RESULTS

Most cause of subfertility in our study was PCOS (43.6%) 25% of patients had more than one cause .as show in diagram No. 1 and table No.1.

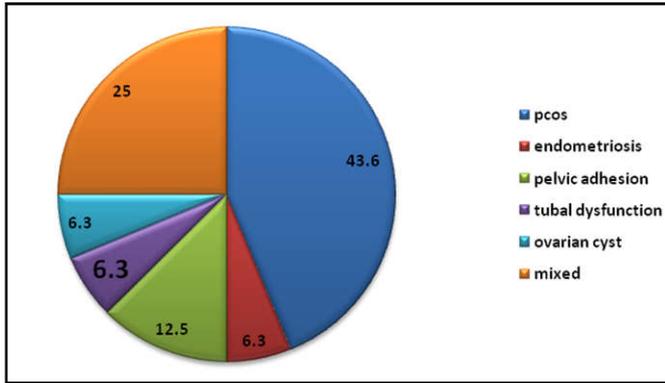


Diagram 1. Causes of subfertility

Table 1. Causes of subfertility

Causes	NO. of patients	Percentage
PCOS	14	43.6%
Pelvic adhesion	4	12.5%
Endometriosis	2	6.3%
Tubal dysfunction	2	6.3%
Ovarian cyst	2	6.3%
mixed	8	25%
Total	32	100 %

More than three quarter of patients (81%) were under 35 years old .as show in diagram No. 2 and table No.2

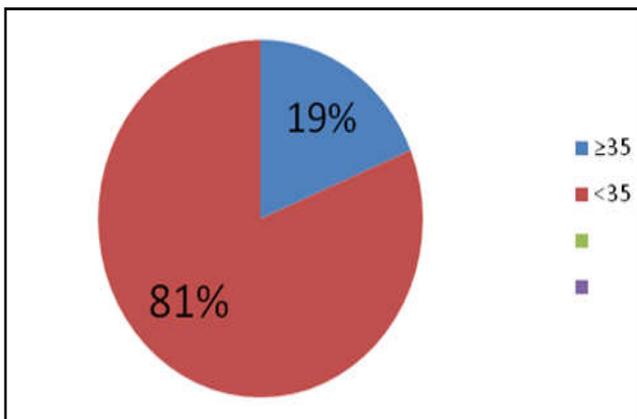


Diagram 2. Age of patients

Table 2. Age of patients

Age	No. of patients	Percentage
≥35	6	19%
<35	26	81%
Total	32	100%

Most female patients with subfertility whose ages below 35 years old had PCOS (46%). on the other hand the patients whose aages above 35 years old had multiple causes. As show in Table 3 (18.8%) of patients had history of surgery and result in pelvic adhesion. as show in diagram No. 3 and Table No. 4

Table 3. Causes of subfertility in relation with age

causes	Age ≥35 No. = 6	Age < 35 No. = 26
PCOS	2(33%)	12 (46%)
Pelvic adhesion	0(0%)	4(15%)
Endometriosis	0(0%)	2(8%)
Tubal dysfunction	0(0%)	2(8%)
Ovarian cyst	0(0%)	2(8%)
mixed	4(67%)	4(15%)
Total	6(100%)	26(100%)

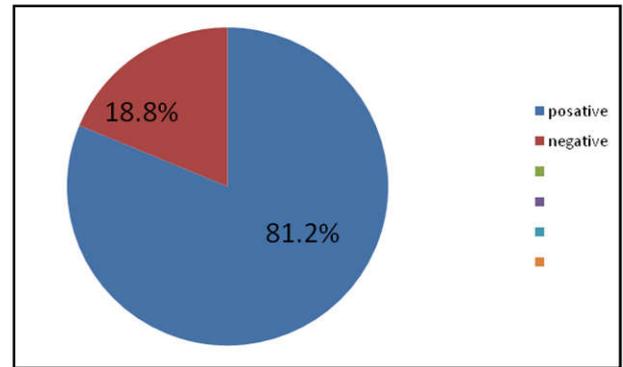


Diagram 3. History of surgery

Table 4. History of surgery

History of surgery	No.	percentage
positive	6	18.8%
negative	26	81.2%
Total	32	100%

DISCUSSION

The work up of an infertile female has to be done with all the possible means available to the attending gynaecologist. The use of diagnostic and now operative laparoscopy has increased the available armamentarium to the surgeons managing infertility (7,8). During laparoscopy the telescope and the attached camera facilitates easy visualisation of the external appearance of the fallopian tubes. Instillation of coloured dye through the cervix with a cannula placed intravaginally allows direct assesment of tubal patency once there is spillage of the dye into pelvic cavity. In the absence of dye flowing from the fimbrial end of the fallopian tube, the tube is presumed to be blocked. False positives have been attributed to tubal cornual spasm occasionally. Visible external peritubal adhesions can be due to previous pelvic infections, endometriosis or surgery. Some studies have suggested an inverse relationship between severity of periadnexal adhesions and conception. Several classifications for periadnexal adhesions have been devised, including that of the American Fertility Society (AFS) score. There seemed to be a better correlation between peritubal adhesions and pregnancy outcome when salpingostomy was included in the classification criteria. It was analysed that the status of the tubal mucosa was the most powerful prognostic factor in predicting pregnancy outcome. Women who are thought to have other co-morbidities should be offered laparoscopy and tubal chromatography so that tubal and other

pelvic pathologies can be assessed at the same time. The main advantage of the use of laparoscopy for management of infertility lies in its direct visualization of the passage of the dye through the tubes and the fimbrial end. As compared to hysterosalpingography the results are much better. The fallopian tube can now be examined directly in real time under magnification and in its natural habitat under physiological conditions (Marconi, 1998) contrary to HSG. In addition when the dye is instilled under pressure it can dislodge the mucus plugs in the clogged ends and open up the tubes.

This is important as more patients can conceive in the post laparoscopy phase as evidenced in the world literature. In case operative laparoscopy is required, additional ports can be placed and kinks and peritubal adhesions can be taken care of at the same time. Judicious use of mono-polar cautery can achieve the dissection of adhesions and kinks without resorting to costly gadgets like harmonic scalpel or ligasure. In addition pathologies of the uterus like fibroids, ovarian drilling, ovarian cystectomy and management of endometriomas can be performed in the same setting^(10,11) However it is pertinent to mention that laparoscopy is an invasive procedure and all the complications associated with general anaesthesia and the laparoscopy can be encountered. It is essential that the surgeon performing the procedure is properly trained and experienced in laparoscopy. The patient has to be properly counseled and all the known complications discussed (Haider, 2010 and Mir, 2005).

Conclusion

We firmly believe that laparoscopy has an important role in the diagnosis and treatment of subfertility. The majority of patients with subfertility, such as those with male factor and/or anovulation, will not need this procedure but a significant number of other patients, such as those with unexplained subfertility and those with tubal factor and endometriosis, can benefit from it. Operative procedures at the time of laparoscopy can enhance conception, naturally or with IUI/IVF, such as lysis of adhesions, ablation of endometriosis, and salpingectomy for hydrosalpinx.

The issue of removal of endometriomas and hydrosalpinx prior to IVF, is still somewhat controversial and individualization of treatment in these cases is recommended. If operative laparoscopy is anticipated in subfertile patients, experienced and competent physicians who are knowledgeable in surgical techniques, as well as all aspects of subfertility diagnosis and treatment, should perform it. Not all subfertility patients will need IVF. Laparoscopy has its own advantages and disadvantages and so does IVF. Laparoscopy still has a place in the armamentarium of the fertility specialists.

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