Introduction

Infertility is defined as one year of un-protected intercourse without pregnancy. This condition may be further classified as primary infertility, in which no previous pregnancies have occurred and secondary infertility, in which a prior pregnancy, although not necessarily a live birth, has occurred ***(Hornstein and Schust, 1996)***. Fecundability is the probability of achieving pregnancy within a single menstrual cycle, and fecundity is the probability of achieving a live birth within a single cycle. The fecundability of a normal couple has been estimated at 20-25% ***(Cramer et al, 1979)***. On the basis of this estimate, approximately 90% of couples should conceive after 12 months ***(Hornstein and Schust, 1996)***.

The causes of infertility may be one or more of the following :

1- Abnormalities in the semen (male factor infertility).

2- Ovulatory disorders (ovulatory factor).

3- Tubal injury, blockage, paratubal adhesions or endometriosis (tubal / peritoneal factor).

4- Abnormalities in cervical mucous-sperm interaction (cervical factor).

5- Rare conditions such as uterine abnormalities, immunologic aberrations and infections.

- In some cases, no specific cause is detected despite an extensive and complete evaluation ***(Hornstein and Schust, 1996)***.
- The relative prevalence of the different causes of infertility varies widely among patient population as summarized in table (1).

Tubal disease, the single most common cause of female infertility, accounts for 25-35% of involuntary infertility ***(Music and Behrman, 1983)***. In approximately 10 to 20% of women with tubal disease, infertility is the result of proximal (uterine end) obstruction of the fallopian tube

(Siegler, 1974 - Sulak et al, 1987 - Novy et al, 1988). The vast majority of patients have distal and peritubal damage.

In the past, proximal tubal obstruction (PTO) was a difficult problem to treat, in that either tubal microsurgery or invitrofertilization (IVF) must be performed. Microsurgical anastomosis of the tube remains a major expensive invasive procedure involving laparotomy and general anaesthesia. In addition, it requires a long convalescent period. Also invitrofertilization is expensive and does not offer the advantages of more than a single chance of conception per attempt, without embryo freezing ***(Platia et al, 1985)***. Recently, a less expensive and less invasive alternative to either microsurgery or invitrofertilization is fluoroscopic transcervical fallopian tube catheterization (TcTc) and salpingoplasty (TC SP) whith have emerged as promising new techniques in the diagnosis and treatment of tubal occlusion ***(Platia et al, 1985 - Thurmond et al, 1987 - Confino et al, 1988)***.

Selective salpingography with tubal catheterization should be considered "the gold standard" test of tubal patency ***(Woolcott et al, 1995)***.

The valuable diagnostic information derived from selective salpingeograms on the status of both proximal and distal tubes, the adjuvant effect toward attaining pregnancy after this procedure, the relatively high pregnancy rate resulting after correction of occlusive disease of the fallopian tubes by transcervical tubal recanalization, the relatively low cost and safety and extremely low rate of complications, recommended the use of transcervical selective salpingography and tubal recanalization as the initial measure in the management of infertility attributable to tubal disease ***(Lang and Dunaway, 1996)***.

Transcervical selective salpingography with tubal catheterization has been performed using fluoroscopic ***(Platia et al, 1985)***, hysteroscopic ***(Novy et al, 1988)***, and ultrasound guidance ***(Lisse et al, 1991)***. The procedure also , can be performed by simple tactile technique as reported by ***Diedrich et al., (1991)***, who reported the characterestic localised lateral pelvic pain felt by the patient when the tubes were successfully catheterized. Grey scale and doppler ultrasound imaging remains today inferior in resolution when compared with radiologic imaging of the uterine cavity and the fallopian tube. For this purpose sonographically guided tubal catheterization is at a clear disadvantage. The use of this modality remains today in a state of the art technology in an experimental stage. Sonosalpingography can be applied during early in-office screening for tubal factor of infertile patient ***(Risquez et al, 1993)***. The cost effective and minimally invasive nature of sonosalpingography represents an alternative test to immediately verify tubal patency and reserve radiologic tubal visualization for those patients who require detailed evaluation of the microanatomy of their fallopian tubes.

Novy et al, (1988), demonstrated that fluoroscopic and hysteroscopic catheterization resulted in 84 and 92% patency rates. ***Ataya and Thomas, (1991)***, demonstrated the advantages of this new procedure of fluoroscopic approach over the hysteroscopic approach in that it (1) does not need cervical dilation (2) - quicker (3)- does not require the use of Hyskon (sticky, difficult to inject, and clean) or Co_2 with insufflation device (4)- avoids the need for the sometimes erroneous personal judgement as to where the exact opening of the tube into the uterine cavity is supposed to be. Although in some cases, this is an easy decision, it is more difficult in other cases. The spherical shaped tip of the guide ensures that the tip will fit into the best angle at the junction of the tubal lumen to the uterine cavity

and (5)- avoids the need for i.v. general, regional anaesthesia or analgesia. For the previous reasons, fluoroscopic guided tubal catheterization offers a significant advantage over existing techniques and makes it the procedure of choice before considering more invasive tubal surger or IVF.

Table (1) : Causes of infertility

The relative prevalence of the etiologies of infertility :	
- Male factor	25-40%
- Female factor	40-55%
- Both	10%
- Unexplained infertility	10%
The approximate prevalence of the causes of infertility in the female :	
- Ovulatory dysfunction	30-40%
- Tubal / Peritoneal factor	30-40%
- Unexplained infertility	10-15%
- Miscellaneous causes	10-15%

(Hornstein et al., 1996).