Introduction

Infertility is the inability to achieve pregnancy or repeated failure to carry a pregnancy within a stipulated period of time. The couple can be considered infertile if after one year of unprotected intercourse of average frequancy, no pregnancy has resulted **(Jones et al., 1988).**

Meanwhile, sterility is the inability to conceive for irreversible cause; as absence of uterus. Approximately, 15% of couples are infertile and about 1-2% are sterile **(Marshall, 1983).**

Infertility is a disorder of couples and both partners must be evaluated. The husband is responsible in about 30% of cases, the wife in approximately 40% of cases, and both in the remainder. The longer the couple has been trying to have a child without success, the greater the progressive decline in the conception rate. This decline is independent of the age of the partners or the frequancy of coital exposure **(Marshall, 1983).**

Behrman and Kistner **(1975)** reported the following incidence for the different factors responsible for infertility:

- disorders of ovulation 15-20%,
- tubal problems 30 -35%,
- male factors 30 - 35%,
- other factors 15 - 25%.

The incidence of anovulation in those who attend infertility clinics was estimated to be 15 - 20% (**Speroff et al., 1973 - Behrman and Kistner 1975).**

A number of effective drugs and hormones are available for therapeutic purposes of anovulation, all of which can be classified into four groups:

1 - LHRH analogues

2 - Human gonadotropins

3 - Chlorotrianisene analogues and

4 - Ergaline derivatives.

Each group of agnts acts through a different mechanism:

- LHRH analogues stimulate the anterior pitutary.
- Gonadotropins stimulate the ovaries directly.
- Chlorotrianisene analogues act as anti-estrogens and thus stimulate the hypothalamic pitutary system.
- Ergaline derivatives inhibit the secretion of prolactin.

All these agents stimulate gonadal function directly or indirectly and are capable of inducing ovulation in properly selected infertile women. Each drug may be used at different dosage and different regimens. All carry the risks of complications, some of which may be severe. These complications can be minimized by close monitoring of ovulation induction (**Sallam, 1983).**

Clomiphene citrate, a triphenylethylene derivative non- steroidal synthetic compound with both estrogenic and anti-estrogenic activity is the most common agent in clinical use for ovulation induction. The day of

initiation of therapy has been chosen customarily to be the 5th day of the menstrual cycle (**Greenblatt et al., 1961 - Gysler et al., 1982**). Its application for induction of ovulation has resulted in high success rates of 55% to 99%, however, conception rates of patients are only between 25% and 43% (**Shepard et al., 1979 - lobo et al., 1982**). This discrepancy between ovulation and conception has been attributed to several clomiphene citrate induced factors, including inadquate maturation of the endometrium (**Cook et al ., 1984**). These effects may involve the steroid receptors mechanism (**Aksel et al., 1986 -Fritz et al., 1991**).

The anti-estrogenic effect of clomiphene citrate has been implemented as the most likely cause of a highly viscus cervical mucus exhibiting a weak fernning pattern and decreased spinnbarkheit prior to ovulation which may lead to decreased sperm penetration into the cervical mucus (**Graff, 1971 - Maxon et al., 1984**). Also this discrepancy could be explained on the basis of apparent ovulation with luteinization of the stroma and / or follicles, ovum entrapment, or luteal phase defect (**Cook et al ., 1984 - Jones et al., 1988**).

The discrepancy between ovulation and conception with clomiphene citrate therapy as discribed by different literatures is the stimulus to perform the present study.