INTRODUCTION

Infertility is a major clinical problem affecting approximately 10-15% of couples **(Sokol, 1997).**

Various techniques were developed to overcome this problem; Most of these techniques can be summarized by the term (Assisted reproductive technology). Assisted reproductive techniques involve procedures that deliver concentrated sperm sample directly to the uterus (artificial insemination), or procedures that acquire fertile ova using laparoscopic or ultrasonographic techniques and assisting fertilization in the laboratory (In vitro fertilization) or in the fallopian tubes using either gamete intrafallopian transfer (G.I.F.T) or zygote intra fallopian transfer (Z.I.F.T) **(Morrell, 1997).**

I.V.F. then requires embryo transfer back into the uterus. G.I.F.T. places unfertilized ova and sperm directly into the fallopian tube. Where (Z.I.F.T) involves placing the fertilized zygote into the fallopian tube.

The latest successful techniques include direct ovum fertilization using micropipette penetration of the zona pellucida (SUZI) or direct intracytoplasmic sperm injection (I. C.S. I.).

These procedures provide hope to even the azoospermic man for whom testicular aspiration may yield a few non-motile sperm **(Gronowski and Landau- Levine 1999).**

Implantation failure following embryo transfer is a major continuing problem in I.V.F. Thus, it has been disappointing that ~ 85% of transferred human embryos resulting from IVF fail to implant in the uterus despite the selection of apparently normal embryos for transfer **(Edwards, 1995).**

The main variables affecting implantation rates are uterine receptivity, embryo quality and transfer efficiency. Embryo transfer is the last and probably least successful step in the I.V.F. treatment procedure, however, much less effort has been placed on assessing or maximizing embryo transfer procedures and the technique of embryo transfer has remained largely unchanged since it was first described. Thus, traditionally embryo transfer after I.V.F. has been performed blindly and placing the embryos within the uterine cavity at a point near the fundus **(Salha et al, 2001; Schoolcraft, 2001).**

The need to revise embryo transfer technique, however, has been highlighted**.** Not touching the endometrium and the uterine fundus with replacement of the embryos in the lumen of the endometrial cavity are considered to be the most important factors for successful embryo transfer by most IVF teams **(Kovacs., 1999; Salha et al., 2001).**

On the other hand, while it has been traditionally accepted that the embryos should be placed ~ 10 mm below the fundal endometrial surface (**Webster., 1986; Brinsden., 1999),** some authors have suggested that placing embryos rather lower in the uterine cavity may improve pregnancy rates (**Waterstone et al., 1991; Naaktgeboren et al., 1998; Brinsden 1999).**

Interestingly, blind catheter placement has been shown to result in a malposition of the catheter in >25% of cases, this indicating that tactile assessment of embryo transfer catheter position is unreliable **(Woolcott and Stanger, 1997).**

Transabdominal ultrasound guidance may represent an important tool in this regard the rationale for ultrasound-guided embryo transfer includes real–time tracking of the catheter tip and more predictable embryo placement **(Salha et al., 2001).**

This study investigates the influence of the depth of embryo replacement on the implantation rate after embryo transfer carried out under transabdominal ultrasound guidance.

AIM OF THE WORK

The aim of this study was to evaluate the influence of the depth of embryo replacement into the uterine cavity on the implantation rate after IVF and embryo transfer carried out under transabdominal guidance.