# *Introduction*

Infertility is a common problem affecting 1 from 7 couples. The ability to help infertile couples to achieve pregnancy has significantly increased. This is mainly due to the introduction of assisted reproductive techniques(ART).**(Evers, 2002).**

However, despite the uniformity in the techniques used in different centers, the success rate vary widely sometimes by 10 fold. This variation is related to many factors involving patient or clinical characteristics. Patient characteristics include variants like age, body mass index (BMI), smoking, duration of infertility and ovarian reserve, cause of infertility. Clinical characteristics entail ovarian stimulation protocols, patient monitoring, oocytes retrieved, embryo transfer policy and cryopreservation programmes **(Thomes, 2004).**

Body Mass Index is important factor which affect on Intra Cytoplasmic Sperm Injection (ICSI) outcome. It measures the body fat calculated from:

* BMI= Weight/Height$^2$ (Kg/m$^2$).

*BMI less than 18.5kg/m$^2$ is underweight.

*BMI of 18.5-24.9kg/m$^2$ is normal weight.

*BMI of 25.0 -29.9 kg/m$^2$ is overweight.

*BMI of 30.0-39.9kg/m$^2$ is obese.

*BMI of 40.0 kg/m² or higher is morbid obesity.

(According to **WHO, 1995).**

Women with BMI over 30 kg/m² take longer time to conceive, compared with women with lower BMI, even after adjusting for other factors such as menstrual irregularity **(Jensen et al., 1999).**

With the increasing prevalence of obesity more women seeking IVF as a treatment for infertility are obese. The data regarding the impact of obesity on pregnancy outcomes after IVF are conflicting. A few studies have shown no effect of increasing BMI on IVF success rates, but they demonstrate higher rates of IVF cycle cancellation in overweight and obese women **.(Mulders et al., 2004; Spandorfer et al., 2004).**

In a large Dutch study, BMI greater than 27 was associated with a lower live birth rate per IVF cycle. However, there was no significant difference when live birth rate per oocyte retrieval was compared with the normal weight group **(Lintsen et al., 2005).** Other groups have reported decreased cumulative live birth rates after IVF. The higher rate of early pregnancy loss with increasing BMI may contribute to these findings **(Fedoresack et al., 2004).**

It has been reported that weight loss may improve ovulation and pregnancy outcome in obese infertile women for all forms of fertility

treatment, including ovulation induction, Intra Uterine Insemination (IUI) and IVF treatment **(Clark et al., 1995).**

Body mass index >25 kg/m² is associated with lower pregnancy rates after IVF when compared with women with BMI of 25 kg/m² or under **(Loveland et al., 2001).**

Body mass index 25.8 to 30.8 kg/m² has to be a risk factor for spontaneous abortion in women after IVF or ICSI **(Fedoresk et al., 2000).**

Women should be informed that female BMI should be ideally in the range 19-30 kg/m² before commencing assisted reproduction, and that a female with BMI outside this range is likely to reduce the success of ART **(RCOG, 2004).**