

## Pregnancy success rate in timed intercourse and intrauterine insemination in patients with hypothalamic amenorrhea

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### Abstract

**Introduction:** Hypothalamic amenorrhea is one of the most prevalent problems leading to anovulation which is due to decrease in pulsatile release of GnRH. This diagnosis can be confirmed only after exclusion of ovarian and pituitary causes lead to anovulation. The most prevalent form, which leads to suppress of reproductive physiology is termed functional hypothalamic amenorrhea. It is a kind of psycho-biological answer to events in life. Patients affected with hypothalamic amenorrhea who want to become pregnant must be induced by exogenous gonadotropin or GnRH to ovulate. Continuous and pulsatile forms of GnRH are administered intra venously or subcutaneously by a portable mini-pump. Most patients consider this method inappropriate because they are obliged to hold a mini-pump with themselves even while they are sleeping. The GnRH pump is not available in Iran. Consequently, exogenous gonadotropin is used for an ovulation induction, then timed intercourse (TI) or intrauterine insemination (IUI) are recommended. More over, *In vitro* fertilization (IVF) or even intracytoplasmic sperm injection (ICSI) techniques could be used. TI is an easier and cheaper method in comparison with IVF and IUI. The objective of this study is to compare the pregnancy success rate of the two methods of TI and IUI.

**Materials and Methods:** In this clinically retrospective study, hypothalamic amenorrhea patients referred to infertility clinics of Reproductive Health Research Center, Tehran, Iran. They registered between April 1999 to March 2005 were considered. Patients were selected based on meeting the entrance criteria of this study. TI or IUI, after induction of ovulation was administered and the rate of successful pregnancies was compared. Among Entrance criteria, age between 20 to 40 years and normal spermogram could be cited. The cases with infertility due to the male factor, uterine anomaly and fallopian tube obstruction were excluded.

**Results:** In the TI group, from 27 cycles, there were 19 pregnant women (70.37%). In the IUI group, from 29 cycles, there were seven pregnant women (24.13%). The difference between these two methods was significant ( $p=0.05$ ). Differences in the number of abortions and ectopic pregnancies between the two groups were not significant. Duration of infertility, mean age, and other demographic characteristic were not significant different factor between the two groups.

**Conclusion:** The results of this study support the TI as the first-line treatment method of hypothalamic amenorrhea. Taking into consideration the easy usage, low cost, and lack of demand for equipment in this method could be recommended as the first step for treatment of hypothalamic amenorrhea's infertile patients.

**Key Words:** Hypothalamic amenorrhea, Infertility, Timed intercourse, Insemination.

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