

Who is preferred to-Do Intra Uterine Insemination? Physician or Midwife

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Abstract

Background: Controlled ovarian hyper stimulation COH/IUI represents a therapy applicable to a wide variety of infertility diagnosis with no significant mechanical distortion of pelvic viscera. Identified variables influenced in Intra Uterine Insemination include: age, cause of infertility, sperm number, motility and normal percentage, use of gonadotropine and number of attempts at IUI. The role of provider on pregnancy outcome in IUI is unclear, and published data are rare. We compared pregnancy rate of result of IUI achieved by physicians and midwives in Hamadan Infertility Center.

Methods: Data were prospectively collected from 89 IUI procedures with unexplained infertility and normal ovarian function, normal semen and normal pelvis at laparoscopy, which failed pregnant at least for 2 years. Controlled ovarian stimulation was performed by HMG on cycle day 3, and dosage varied according to the ovarian follicular response of patients by ultrasonography. Patients received 10/000 IU /IM HCG, when diameter of follicle reached >18mm. All patients received 50 mg /IM progesterone daily for 14 d. BHCG was tittered 15 d after IUI.

Results: From 89 patients selected with unexplained infertility, IUI was done for 63 cases by trained midwives and for 26 cases by physicians. Mean age and duration of infertility in patients treated by physicians and midwives did not significantly different (27/3+5/32 to 25/5+4/2 y) and (5/16+3/6 y to 4/43+3/1 y) respectively. The pregnancy rate was 26/9% and 21/1%, respectively and there was not significant difference between two groups.

Conclusion: we found no association between success rate and providers in IUI procedure, and pregnancy rate did not vary significantly between physicists and trained midwives in patients without cervical stenosis.

Key words: IUI, pregnancy rate, provider

Introduction

Infertility affects approximately 10-15% of couples in reproductive age group (1).

Most couples seeking infertility care are not faced with sterility of one partner but have a relative lowering of their monthly likelihood of conception, or cycle fecundity (2).

About 10-15% of infertile couple will ultimately reach unexplained in fertility diagnosis. The monthly fecundity average in couples with unexplained infertility is 1/5-3%.

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do increase prospect of pregnancy (3).

Many techniques for artificial insemination have been described such as intra cervical, intra uterine, intra peritoneal and intra follicular insemination as well as fallopian tube perfusion. Intrauterine insemination (IUI) is the best studied and most widely practiced of all insemination techniques (1).

This approach has four potential advantages, which include increasing the number of oocytes available for fertilization, increasing the level of follicular and luteal phase gonadal steroids, optimizing the likelihood of gamete interaction with viable oocytes and sperm virtually guaranteed to be simultaneously present in the female genital tract and providing large number of capacitated sperm at the site of fertilization in the distal fallopian tube.

Many of these features are common to the more invasive, oocyte retrieval technologies such as IVF/ET, gamete intrafallopian transfer (GIFT), or zygote intra fallopian transfer (ZIFT) (2).

Controlled ovarian hyper stimulation (COH) /IUI represents a therapy applicable to a wide variety of infertility diagnoses with no significant mechanical distortion of pelvic viscera, such as cervical factor infertility, oligoasthenospermia, luteal phase defect, luteinized unrupture follicle, minimal endometriosis, uncharacterized immunologic infertility and unexplained infertility (4).

The outcomes of pregnancy resulting from a cycle of COH/IUI appear to be comparable with those observed with other forms of infertility therapy.

Previous studies have suggested that several variables can influence the out come after IUI, which include: age, cause of infertility, sperm number, motility and normal percentage, use of gonadotropin and number of attempts at IUI (5, 6).

The influence of provider on pregnancy outcome at embryo transfer (ET) is considered as important factor in some studies (7). In contrast, the others reported nurses performing ET have achieved pregnancy rate equal or superior to that of achieved by physicians (8).The influence of provider on pregnancy outcome at IUI is unclear, and published data are rare.

We compared pregnancy rate as a result of IUI achieved by physicians and midwives in infertility center.

Materials and Methods

Data were prospectively collected from 89 IUI procedures with cervical and unexplained infertility that were stimulated with human menopausal gonadotropin (HMG) from October 2001 to December 2003 at Hamadan Infertility Center.

Admission of patients to the IUI program depended on strict criteria was established by the attending staff. Controlled ovarian stimulation was performed by HMG on cycle day 3 in patients with cervical and unexplained infertility with normal ovarian function, normal semen and normal pelvis at laparoscopy, which failed pregnant at least for 2 years. Gonadotropin dosage varied according to the ovarian follicular response of patient by ultrasonography. Physicists made decisions about patient stimulating programs.

The patients received 10/000 IU/ IM HCG. When diameter of follicles reached ≥ 18 mm, IUI was done with two physicians and two trained midwives one other day. Immediately after IUI, patients were placed in supine position for 30 min. All patients received 50 mg IM Progesterone daily for 15d, BHCG was tittered 15d after IUI.

Statistical analysis The main outcome variable was defined as rising BHCG. Because the data were retrospectively analyzed, sample size was determined by a defined period of time, and was not prospectively determined using power analysis.

Results

From 89 patients selected with cervical and unexplained infertility, IUI was done for 63 cases by trained midwives and for 26 cases by physicians. In five cases midwives were unable to pass the catheter, which was conducted by physicists, but no pregnancy was occurred in these patients. We excluded these cases from analysis.

Mean age and duration of infertility in patients treated by physicians and midwives were not

significantly different (range 27/3 \pm 5/32 to 25/5 \pm 4/2 y) and (4/43 \pm 3/1 to 5/16 \pm 3/6 y respectively).

The pregnancy rate was 26/9% and 21/1%, respectively and there was not significant difference between two groups.

Discussion

In this study the most important known factors influencing the outcome of pregnancy at IUI included: age, cause of infertility and mean duration of infertility were not significantly different between two groups. Etiology and use of gonadotropin in two groups were similar.

The influence of provider on pregnancy outcome in IUI is unclear. Although we found a better success rate among the patients inseminated by physicians, results were not statistically significant and no definitive conclusion could be drawn.

However contrary to another study (7), we found no association between success rate and providers in IUI procedure, and pregnancy rate did not vary significantly between physicians and trained midwives in patients without cervical stenosis.

As it was reported in another study (8), we observed that trained midwives could do IUI in patients without cervical stenosis with similar success and with lower cost.

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