

Effect of Duration of Infertility on IUI Outcome in Unexplained Infertility: A Prospective Study

Ulfat Shah¹, Qurat Ul Ain², Shahnaz Taing³, Iqra Riyaz⁴

¹Senior Resident, Department of OB and G, GMC Srinagar, Jammu and Kashmir, India, ²PG Scholar, Department of OB and G, GMC Srinagar, Jammu and Kashmir, India, ³Professor and Ex. Head, Department of OB and G, GMC Srinagar, Jammu and Kashmir, India, ⁴Senior Resident, Department of OB and G, GMC Srinagar, Jammu and Kashmir, India

Abstract

Background: The purpose of this study was to study the effect of duration of infertility on IUI outcome in unexplained infertility.

Methods: This study was done in 40 couples with unexplained infertility. Mean age of female partner was 30 ± 5 years (25–30) years. In 6 (15%) couples, duration was <2 years; in 22 (55%) duration was between 2 and 5 years and in 12 (30%) duration was greater 5 years or more. A maximum of two cycles of IUI were done in two consecutive cycles after ovarian stimulation with clomiphene citrate 50 mg using double density gradient method of semen preparation.

Results: Two pregnancies (33.3%) were achieved in six couples with duration of infertility <2 years; 4 (18.2%) pregnancies were achieved in 22 couples with duration of infertility between 2 and 5 years and no (0%) pregnancy was achieved in couples with duration of infertility 5 years or more.

Conclusion: The success rate of IUI decreases with increase in duration of infertility.

Key words: IUI, HCG, Pregnancy rate, Unexplained infertility

INTRODUCTION

Unexplained infertility is best characterized as Subfertility.^[1] It affects 10–30% of couples seeking treatment for infertility.^[2,3] For unexplained infertility, both IUI alone and IUI with controlled ovarian stimulation appears to be more effective than expectant management.^[4]

Overall success rate of ovarian stimulation with IUI varies between 8% and 22%.

Factors that influence IUI outcome include age of the female, duration of infertility, use of ovulation induction drugs, semen analysis, semen preparation techniques, timing, and number of inseminations.

Aims and Objectives

The aim of the study was to study the effect of duration of infertility on IUI outcome.

MATERIALS AND METHODS

This study was done in Lal Ded Hospital Srinagar from January 2019 to September 2020 in 40 couples with unexplained infertility. Couples enrolled strictly followed the definition of unexplained infertility and an informed consent was taken from them. The mean age of female partner was 30 ± 5 years (25–30 years). The mean duration of infertility was 3.4 ± 2.28 years (1.12–5.68 years) [Table 1].

Ovulation induction with clomiphene citrate 50 mg was given from Day 2 of cycle for 5 days. Transvaginal ultrasonography to monitor follicular growth was done from day 9 till dominant follicle was 18–20 mm. HCG 5000 IU injection was given intramuscularly. IUI was planned 36–48 h after HCG trigger. Semen preparation was done using double density gradient centrifugation technique. Intercourse was advised for 3 days after IUI.

Access this article online



www.ijss-sn.com

Month of Submission : 09-2022
Month of Peer Review : 10-2022
Month of Acceptance : 11-2022
Month of Publishing : 11-2022

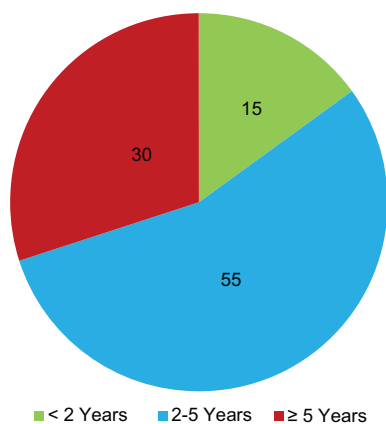
Corresponding Author: Dr. Iqra Riyaz, Senior Resident, Department of OB and G, GMC Srinagar, Jammu and Kashmir, India.

Table 1: Distribution of couples based on duration of infertility

Duration (years)	No. of couples	Percentage
<2 years	6	15
2–5 years	22	55
≥5 years	12	30
Total	40	100

Mean±SD (Range)=3.4±2.28 (1.12–5.68)

Distribution of couples based on duration of infertility



Micronized progesterone 200 mg was given twice a day for 14 days. A Gravindex test was performed after 14 days.

A maximum of two cycles of IUI were given.

RESULTS

Among couples who were infertile for <2 years, 2 (33.3%) pregnancies were achieved; 4 (18.2%) in couples infertile for 2–5 years and no (0)% pregnancy was achieved in couples infertile for 5 years or more. The difference was found to be statistically significant with $P = 0.001$ [Table 2].

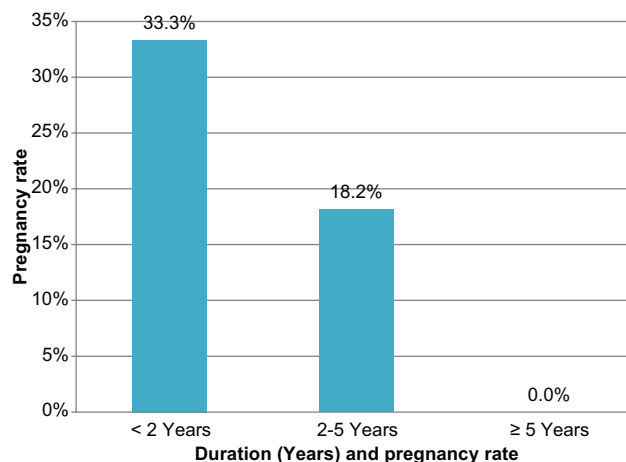
DISCUSSION

The duration of infertility is an important prognostic factor in success of IUI. In our study, the trend of IUI success declined with increase in infertility duration. The pregnancy rate was 33.3%, 18.2%, and 0% in duration of infertility <2 years, 2–4 years, and 5 or more years, respectively. This was found to be statistically significant ($P = 0.001$). Iberico et al.^[5] have in their studies mentioned a lower pregnancy rate where duration of infertility was more than 3 years ($P = 0.073$). Delgadillo et al.^[6] also found that greatest

Table 2: Duration of infertility and pregnancy rate (PR)

Duration of infertility	No. of couples	No. of pregnancies	PR (%)	P-value
<2 years	6	2	33.3	<0.001*
2–5 years	22	4	18.2	
≥5 years	12	0	0.0	
Total	40	6	15.0	

*statistically significant ($P < 0.05$)



success of IUI was achieved when duration of infertility was 4 years or less ($P < 0.05$) ($P < 0.05$).

CONCLUSION

IUI is an effective treatment to start with in couples with unexplained infertility. The success rate of IUI and duration of infertility vary inversely.

REFERENCES

1. Fisch P, Casper RF, Brown SE, Wrixon W, Collins JA, Reid RL, et al. Unexplained infertility: Evaluation of treatment with clomiphene citrate and human chorionic gonadotropin. *Fertil Steril* 1989;51:828-33.
2. Athaullar N, Proctor M, Johnson NP. Oral versus injectable ovulation induction agents for unexplained subfertility. *Cochrane Database Syst Rev* 2002;2002:CD003052.
3. Collins JA, van Steiriteghem A. Overall prognosis with current treatment of infertility. *Hum Reprod Update* 2004;10:309-16.
4. NICE Guidelines. National Institute of Clinical Excellence, Fertility, Assessment and Treatment for People with Fertility Problems. London, UK: RCOG Press; 2004.
5. Iberico G, Vioque J, Auza N, Lozana JM, Roca M, Liacer J, et al. Analysis of factors influencing pregnancy rates in homologous intrauterine insemination. *Fertil Steril* 2004;81:1308-13.
6. Delgadillo JC, Ruiz JC, Minguia AC, Acosta SV, Solís VS, Villa GB, et al. Prognostic factors of pregnancy in intrauterine insemination. *Gynecol Obstet Mex* 2006;74:611-25.

How to cite this article: Shah U, Ain QU, Taing S, Riyaz I. Effect of Duration of Infertility on IUI Outcome in Unexplained Infertility: A Prospective Study. *Int J Sci Stud* 2022;10(8):45-46.

Source of Support: Nil, **Conflicts of Interest:** None declared.