

ORIGINAL RESEARCH ARTICLE

Usage of Gonadotropin among Females in a Tertiary Care Center

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ABSTRACT

Gonadotropins (or glycoprotein hormones) are protein hormones secreted by gonadotrope cells of the anterior pituitary of vertebrates. In women, Gonadotropins may be used for Infertility. So this study was aimed to find out indications, outcome and adverse effects of Gonadotropin among females. A pilot cross sectional observational study was planned out. 20 was the estimated sample size. All female outpatients who were treated with Gonadotropin were included. The data was collected retrospectively. Details on usage of drugs were recorded using case record form. The collected data was analysed statistically. Gonadotropin was commonly given in females at the age of 21-30 years. Chorionic Gonadotropin was the commonly used Gonadotropin. The most common indication for prescribing Gonadotropin was found to be threatened abortion. Less number of patients developed complications during pregnancy. Only 12.5% of patients went into abortion. No specific adverse effects were reported.

Key words: usage, Gonadotropin, female, Tertiary care center.

INTRODUCTION

Gonadotropins (or glycoprotein hormones) are protein hormones secreted by gonadotrope cells of the anterior pituitary of vertebrates.^[1] This is a family of proteins, which include the mammalian hormones follicle-stimulating hormone (FSH), luteinizing hormone (LH), placental chorionic gonadotropins hCG and eCG^[2] and chorionic gonadotropin (CG), as well as at least two forms of fish gonadotropins. These hormones are central to the complex endocrine system that regulates normal growth, sexual development, and reproductive function.^[3] The hormones LH and FSH are secreted by the anterior pituitary gland, while hCG and eCG are secreted by the placenta.^[4]

In women, Gonadotropins may be used:

- To stimulate ovulation related to low natural Gonadotropin or estrogen levels.
- When Clomiphene alone or Clomiphene combined with another medicine has been ineffective for correcting irregular or no ovulation caused by polycystic ovary syndrome (PCOS).
- For developing multiple egg follicles on the ovaries. Multiple eggs are harvested and used in assisted reproductive

techniques such as in vitro fertilization or gamete intrafallopian transfer.

- In combination with intrauterine insemination for couples with unexplained infertility when Clomiphene has not worked.

The combination human Menopausal Gonadotropin (hMG)/human Chorionic Gonadotropin (hCG) or recombinant human follicle-stimulating hormone (rFSH)/hCG treatment can consistently stimulate ovulation. It results in pregnancy in 60 out of 100 women failing to ovulate. But of those pregnancies, up to 35% end in miscarriage.^[5]

There are a number of protocols for the type, dosing, and timing of ovulation induction with gonadotropins^[6].

Intrauterine insemination (IUI), in combination with gonadotropins, may be recommended if the woman does not ovulate or when there is another known issue, such as a low sperm count, difficulty ejaculating, or a narrow cervical opening or if the couple's infertility is unexplained. IUI in combination with gonadotropins may increase

overall pregnancy chances, but it also increases the chances for multiple pregnancy.^[7]

So this study was aimed to find out indications, outcome and adverse effects of Gonadotropin among females.

METHODOLOGY

A pilot cross sectional observational study was planned out. The protocol was approved by Institutional Human Ethics Committee. 20 was the estimated sample size. All female outpatients who were treated with Gonadotropin were included. The data was collected retrospectively. Details on usage of drugs were recorded using case record form. Personal details like, name, Date of Birth, telephone number and address were not taken. Confidentiality of patient details was maintained. The collected data was analysed statistically.

RESULTS

68.75% of patients were in the age group of 21-30 years. 25% of patients were in the age group of 31-40 years. 6.25% of patients were in the age group of 41-50 years (**Figure 1**).

- Chorionic Gonadotropin (two brands) was the drug used in all patients.
- It was used for threatened abortion in 68.75 %, previous history of blighted ovum in 18.75%, previous history of spontaneous abortion in 6.25% and primary infertility in 6.25% of patients (**Figure 2**).
- Among these patients, there was continuation of pregnancy in 81.25% of patients, abortion in 12.5% of patients and there was no follow up for 6.25% of patients (**Figure 3**).
- Out of the patients who were continuing pregnancy, 76.9% of patients were not yet delivered, there was LSCS done in 15.4% of patients due to complications and there was normal delivery in 7.7% of patients (**Figure 4**).
- LSCS was done due to complications like foetal distress with meconium stained liquor and oligohydramnios.
- No specific adverse effects were reported.

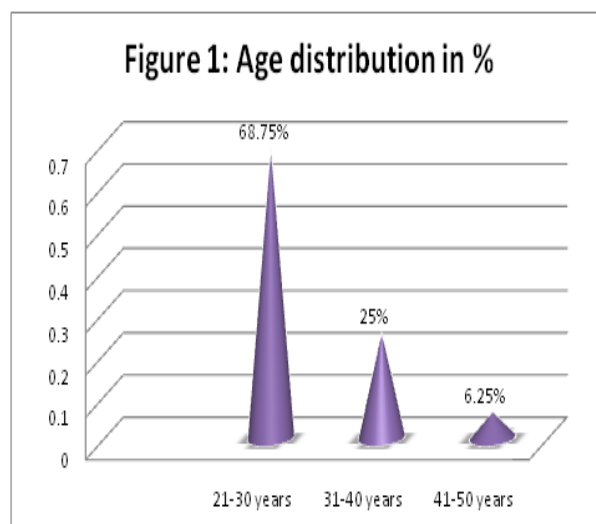


Figure 1: Age distribution in %

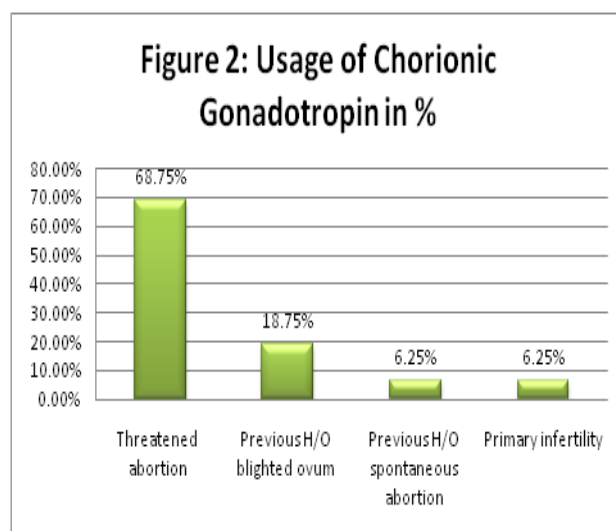


Figure 2: Usage of Chorionic Gonadotropin in %

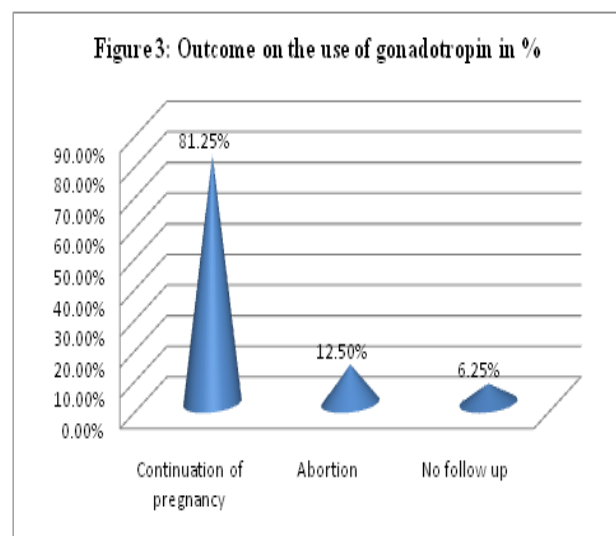


Figure 3: Outcome on the use of gonadotropin in %

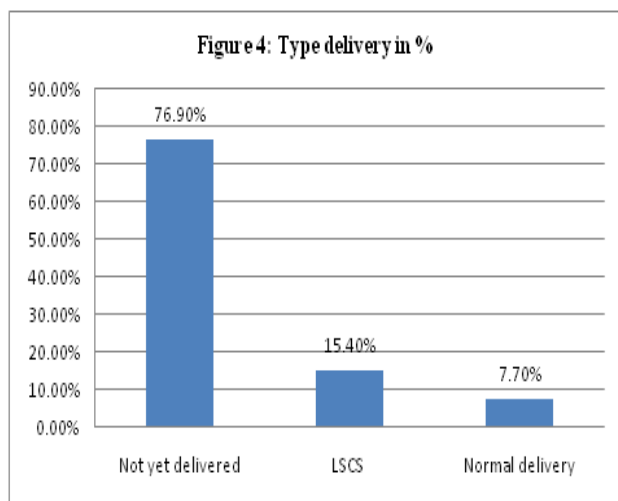


Figure 4: Type delivery in %

DISCUSSION

- Gonadotropin was commonly given in females at the age of 21-30 years.
- Chorionic Gonadotropin was the commonly used Gonadotropin.
- The most common indication for prescribing Gonadotropin was found to be threatened abortion
- Less number of patients developed complications during pregnancy.
- Only 12.5% of patients went into abortion.
- No specific adverse effects were reported.

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