



BRIEF COMMUNICATION

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Low dose of rFSH [100 IU] in controlled ovarian hyperstimulation response: a pilot study

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Abstract

Background: The initial dose of recombinant Follicle Stimulating Hormone [rFSH] to be used in assisted reproduction treatment depends on several factors, mainly the cause of the infertility and the patient's age. For young patients [≤ 35 years] usually an initial dose of around 150 IU of rFSH is recommended, but there are no studies proving that this should actually be the standard initial dose. We aimed to report the experience of a low-cost Human Reproduction Center where a dose of 100 IU of rFSH was used for controlled ovarian hyperstimulation [COH].

Findings: An observational prospective study was performed on 212 women aged ≤ 38 years old that underwent high-complexity assisted reproduction treatments. The patients' infertility was mainly caused by tuboperitoneal, idiopathic or male factors. Controlled ovarian stimulation was performed using 100 IU of rFSH. Regarding the COH, 53.8% of the patients presented a satisfactory response, 25.9% low response, 14.2% hyper-response, and 6.1% developed ovarian hyperstimulation syndrome. Of the 55 patients with poor response, 20 started a new cycle with an initial dose of 200 IU of rFSH; 65% showed a satisfactory response, 10% a poor response, 20% a hyper-response, and 5% developed OHSS.

Conclusion: The initial dose of 100 IU of rFSH was considered adequate for controlled ovarian hyperstimulation, meeting the aim to reduce the costs of the assisted reproduction treatment.

Keywords: Assisted reproduction treatment, Controlled ovarian hyperstimulation, Recombinant FSH, Infertility, Oocyte

Background

Conjugal infertility is characterized by the absence of spontaneous pregnancy after the minimum period of twelve months, with the practice of regular and unprotected intercourse [1]. Although infertility is not a physical problem and does not threaten the life of the individual, marital infertility is related to emotional, mental and social problems, as the act of procreation is one of the goals and desires of the human [2]. Studies conducted by the British Association of Counselling in Infertility and the Royal College of Obstetricians and Gynecologists demonstrated that infertility is related to low productivity and the loss of financial reserves for that country [3]. Approximately 20% of adults of

reproductive age face difficulties to conceive. In Brazil, data of the Ministry of Health considered to be underestimated reported the existence of at least 278,000 individuals affected by infertility [4], however it is believed that approximately 30,000,000 people in Brazil are infertile.

Since the birth of the first in vitro fertilization [IVF] baby almost 30 years ago, dramatic developments have occurred in assisted reproductive technology. The approach of maximizing pregnancy rates per cycle has led to very complex and costly ovarian hyperstimulation protocols. Ovarian stimulation has been applied with the aim of increasing the number of oocytes in order to compensate for inefficiencies of the IVF procedure, enabling the selection of one or more embryos for transfer [5]. In the context of improved laboratory performance, the need for a large number of oocytes as an integral part of a successful IVF program may be questioned [6].

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