IUI result after random stimulation in patient with irregular cycle

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Introduction

The theory of a multicyclic development of follicles during the menstrual cycle prompted new approaches to ovarian stimulation, such as starting gonadotrophins for ovarian stimulation at any time during the menstrual cycle or using double stimulation during it, with stimulation in both the follicular and luteal phases.

This new approach to ovarian stimulation is particularly useful for women seeking fertility treatment living far away from the center , poor responders could benefit from the new stimulation protocols.

In order for ovulation to occur, the follicle in the ovaries is required to mature and rupture to allow the release of the egg to be fertilized. It is evident that for this to occur, there are particular conditions of the follicle that need to be met.

If the follicle is not sufficient, it loses traction and another follicle begins developing to form a second developmental wave. When the follicle has matured sufficiently, it ruptures and ovulation begins.

This study was done to determine how to enhance the chances of pregnancy by random stimulation protocol and IUI in patients with irregular cycle and poor responders.

This is a prospective study conducted at reproductive unit alhawari hospital, from may 2019 to December 2019.

15 women enrolled to study seeking for fertility with irregular cycle and diagnosed as poor responder before, there is no need to wait for the menstrual period and ovarian stimulation can be started at any time during the cycle, even after ovulation.

Gonadotropins (Gonal f) was started after ultrasound and estradiol level obtained

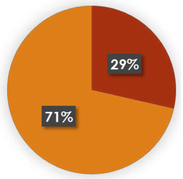
The patients were followed up by folliculometry and eventually HCG given and IUI done with in 36 hours

This study was carried out after making sure that all male participants had normal semen parameter.

Results

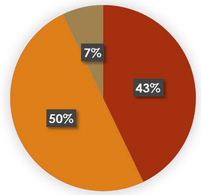
Distribution of patients according to age

Age	no
35- 40	5
41- 45	10



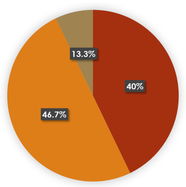
Distribution according to length of cycle

length of cycle	no
30- 35	6
36- 40	7
40- 45	2



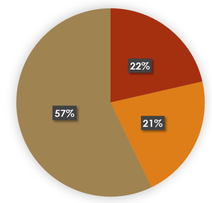
Distribution according to number of follicle

Number of follicle	no
1	6
2	7
3	2



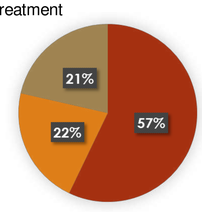
Distribution to follicular size

foll size	N0
10 mm	3
11mm –14mm	4
15mm	8



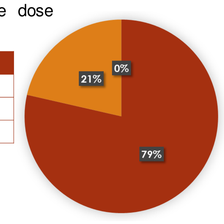
Distribution according to estrogen level before treatment

Estrogen level	no
80-100	9
101- 120	3
120- 140	3



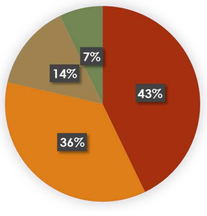
Distribution according to total gonadotropine dose

dose	no
2000 - 3000	11
3000- 4000	4
≤ 4000	0



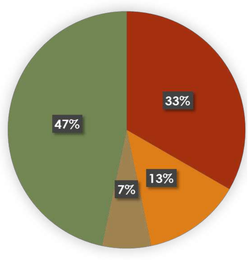
Distribution according to E2 after treatment

E2 after treatment	NO
300- 500	6
501-800	5
801- 1100	2
1101- 1400	2



IUI out come

Outcome	Number
Taking home baby	5
First trimester abortion	2
Chemical pregnancy	1
No pregnancy	7



Conclusion

Our results supported the hypothesis that follicular development in women occurs in a wave-like fashion during the menstrual cycle. We observed nonrandom wave-like changes in follicle number and diameter and confirmed that women exhibit two or three waves of folliculogenesis during an IOI. This knowledge challenges the previously held notion that a single cohort of antral follicles grows only during the follicular phase of the menstrual cycle.

Documentation of a wave phenomenon of ovarian follicular development in women provides a new model for folliculogenesis during the human menstrual cycle. We anticipate that the knowledge of follicular waves during the menstrual cycle will have profound implications for infertility diagnoses and treatment in women.

The development of more than one wave of follicular development during a woman's cycle may provide women undergoing assisted reproduction with better opportunities for initiating ovarian stimulation protocols.

This option would provide women with a more time-efficient and less expensive treatment regimen. Consideration of a wave model for ovarian follicular growth may also be useful for the development of more efficacious and user-friendly hormonal contraceptive regimens.

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