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Clinical & Embryology
Academy of ART
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i-Ceat RESONANCE

TEN COMMANDMENTS SERIES

INTRAUTERINE INSEMINATION

> Little by little, one travels far
> – **J.R.R Tolkien**

Preface

i-Ceat RESONANCE, the monthly bulletin, is the path-breaking academic initiative by Clinical and Embryology Academy of ART. It aims to mentor the budding fertility specialists and embryologists from the very basics to the highest level of clinical expertise.

We present before you the second volume of this monthly bulletin. Here we are discussing about the first stepping stone in the field of ART **"INTRAUTERINE INSEMINATION."** The ART clinicians face many challenges regarding success of IUI. We have tried to bust all the myths and dilemmas with the following "TEN COMMANDMENTS FOR THE SUCCESS OF IUI."

We sincerely wish that our fraternity is benefitted academically and the knowledge enhances their results.

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E4: Course 2

> It is only the first step that is difficult.
> **- Marie De Vichy-Chamrond**

THE 10 COMMANDMENTS FOR SUCCESS IN IUI

IUI is an office procedure in which the processed semen of partner or donor is placed directly into a women's uterus close to ovulation to achieve pregnancy **(ASRM).**

So it is a **LEVEL I** Assisted Reproductive Procedure in which ovulation and fertilization happen inside the body of a female partner.

PREREQUISITES OF IUI:

- Ovulatory Cycle
- Atleast one patent fallopian tube (preferably both)
- Total Motile Sperm Count >10 million/ml

INDICATIONS OF IUI:

- Unexplained Infertility
- Suboptimal Male Factor
- Minimal to mild endometriosis
- Anovulatory cycles
- Unilateral tubal disease
- Cervical factors
- Physical or psychosexual dysfunction due to
  - Hypospadias
  - Retrograde Ejaculation
  - Erectile Dysfunction
  - Vaginismus
- HIV discordant couple

Donor Insemination is carried out in

- Azoospermia
- Severe OATS where IVF-ICSI is not affordable
- Inherited genetic diseases in male partner
- Single Women

THE 10 COMMANDMENTS FOR SUCCESS IN IUI

1. In order to prevent multiple gestation pregnancies, aim of COS in IUI cycles is monofollicular or bifollicular growth. IUI is withheld when more than two dominant follicles >15 mm or more than five follicles >10mm at the time of trigger or LH surge are present.

2. The optimal follicle size for trigger is 18-20mm. Mature oocyte is fertilizable 12-24 hours after release. Single Insemination is preformed 24-40 hours after the trigger.

3. Trilaminar Endometrium with thickness >8mm is favourable.

4. WHO recommends an Ejaculatory Abstinence of 2-7 days before semen collection. Semen has to be processed with in 30 minutes of ejaculation and IUI has to be done within 1-2 hours of semen processing. Result of IUI is independent of choice of catheter

5. **CRITERIA OF SEMEN FOR IUI:**
   - TMSC in native sample- 5 to 10 million
   - Total Motility in native sample >30%
   - Inseminating Motile Count ≥5 million
   - Sperm Morphology using strict criteria >4% normal morphology.
   - Optimal volume of inseminate: 0.3ml-0.5 ml

6. Sexual Intercourse is allowed around the time of IUI. It improves the success rate of IUI, especially in couples with non male factor infertility. Women undergoing IUI, should have 10 to 15 minutes of bed rest after an insemination.

7. Natural Micronized Progesterone is the preferred progestin for Luteal phase support when IUI is carried out in COS cycles.

8. IUI is not recommended in natural ovulatory cycles (ASRM 2020) unless only cervical factor is the cause. When going for OS with gonadotrophins, regimens with 75IU or lower should be used because higher doses have similar pregnancy rates but higher multiple pregnancy rates. No benefit of adding a GnRH antagonist to gonadotrophins for OS.

9. Women above 35 years of age have declining ovarian reserve and oocyte quality. So IUI should be done judiciously in them. Female obesity is an established cause of poor reproductive outcome. Similarly, long duration of infertility lowers the success rate of IUI.

10. IUI should not be tried in severe male factor infertility, bilateral tubal blockage and severe ovulatory disorders.

Thus, for correctly selected patients who have failed to conceive with expectant management, IUI with ovarian stimulation is more cost-effective and less invasive than IVF.

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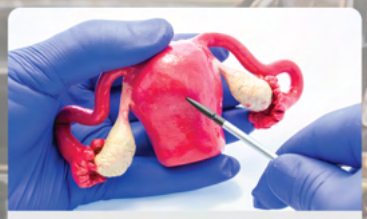

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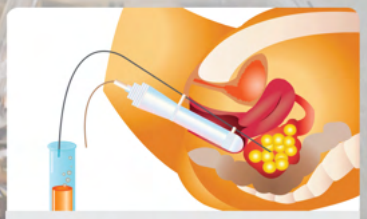

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