

"COMMUNICATION"

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TOPIC OF DISCUSSION

**WHAT TYPE OF INSEMINATION DO YOU
PRACTICE?**

Questions By : **Aanantha Lakshmi**

Summary By: **Sanketh Dhumal Satya**

CHAT DISCUSSIONS COMPILED BY



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SUMMARY OF SURVEY RESULTS

“WHAT TYPE OF INSEMINATION DO YOU PRACTICE? ”

By Team Ihera

POLL QUESTIONS – By Aanantha Lakshmi

POLL SUMMARY – By Sanketh Dhumal Satya

Survey Reveals Strong Preference for ICSI Among Group Members Despite Mixed Evidence

Introduction

A recent poll conducted among 404 members of our community has shed light on the prevailing preferences and justifications for insemination techniques, particularly focusing on In Vitro Fertilization (IVF) and Intracytoplasmic Sperm Injection (ICSI). The results reveal a significant inclination towards ICSI, driven by perceptions of its efficacy in achieving higher fertilization and producing more embryos.

Poll Results: A Strong Preference for ICSI

The survey asked participants to express their preferences for insemination techniques, revealing the following distribution:

- **IVF for non-male factor cases and ICSI for male factor cases:** 19.6%
- **ICSI for all cases:** 32.7%
- **IVF for very few cases, majority ICSI:** 45.5%
- **Never done IVF:** 2.2%

A significant majority of respondents—45.5%—expressed a preference for using ICSI in most cases, with very few relying on conventional IVF. Another 32.7% favoured ICSI for all cases, regardless of the underlying factors. Only 19.6% opted for a more traditional approach, reserving ICSI for male factor cases and using IVF for non-male factor cases. A small minority of 2.2% reported never having undergone IVF.

Reasons Behind the Preference

The justifications for these preferences highlight a range of considerations, with many members prioritizing the perceived advantages of ICSI:

More fertilization and more embryos: 57.2%

Clinic protocol: 15.8%

Personal choice of guidelines: 5.2%

Fear of fertilization failure: 3.2%

Cost: 1.2%

Ease and convenience: 0.5%

The predominant reason cited by 57.2% of members was the belief that ICSI leads to higher fertilization rates and more embryos, a perception that has clearly influenced the choice of technique. Clinic protocols also played a significant role, guiding the decisions of 15.8% of respondents. Other factors, such as personal choice, fear of fertilization failure, cost, and convenience, were less frequently mentioned but still contributed to the overall preference for ICSI.

Embryo Chat –DISCUSSION SUMMARY

By HARSH JAIN & RICHA KUMARI

General Preferences and Approaches:

Conventional IVF:

Clinical Preference: cIVF is typically preferred for patients without male factor infertility. It is particularly favored in the first cycle for cases with tubal obstruction.

Natural Fertilization Process: cIVF is praised by professionals for closely mimicking in vivo fertilization, allowing for natural selection mechanisms to play a role. This is considered beneficial for reducing risks associated with overuse of ICSI, such as bypassing natural selection.

Lower Invasiveness and Cost: cIVF is less invasive compared to ICSI and is generally associated with lower costs and fewer potential genetic or epigenetic issues. Concerns: Polyspermy, poor or no fertilization.

ICSI:

Indications for Use: ICSI is generally preferred by the embryologists for specific clinical indications, particularly in cases of male infertility, poor semen parameters, low oocyte yield, advanced maternal age, or poor egg quality. It is also considered essential in situations where there is a high risk of TFF, especially when the quality of gametes is unknown or sub-optimal.

Over use Concerns: Despite its advantages, concerns about overusing ICSI, especially in the non-male factor, persist due to potential long-term risks from bypassing natural selection, though these are not yet proven.

False Sense of Control: Some experts believe ICSI provides a "false sense of control" over fertilization.

Risk Mitigation Strategies:

Rescue ICSI: To mitigate the risks of fertilization failure, some embryologists use short co-incubation, followed by denudation and secondary PB checks, with rescue ICSI if necessary.

Splitting Oocytes: Some area advocating for dividing oocytes between IVF and ICSI, either 50-50 or 60-40, to reduce risks.

Specific conditions: Medical conditions such as adenomyosis /endometriosis or advanced maternal age, may influence the choice between IVF and ICSI. In such cases, ICSI might be preferred due to its ability to reduce variability in fertilization outcomes.

Practical Insights and Considerations: -

Sperm Preparation &Insemination:

Critical Role of Sperm Preparation: The embryologists stressed meticulous sperm preparation in conventional IVF, recommending precise judgment to determine sperm concentration and volume. avoid complications like polyspermy.

Precision in Insemination Techniques: In conventional insemination, watch out for blood or tissue in the OCC to avoid hindering sperm penetration and negatively impacting fertilization outcomes.

Challenges:

Total Fertilization Failure: TFF is a common challenge; using the right insemination technique and a 1:1 embryo selection approach can help reduce risk. Persistent TFF requires further investigation.

Fertilization and Blastocyst Formation:Sometimes, ICSI can lead to 100% fertilization but poor or no blastocyst formation by day5, even with normal oocyte and sperm quality. Factors like timing of zygote formation,

first cleavage, and gamete development potential are critical yet unpredictable. These factors create significant challenges for achieving successful blastocyst formation. Day 3 and morula's can still be successful, emphasizing the need for individualized treatment and careful embryonic assessment.

Economic and Ethical Considerations:

Cost and Policy Implications:

The economic impact of ICSI, especially with normal semen parameters, was a key topic. Clinic policies and cost considerations heavily influence the choice between IVF and ICSI. Government initiatives to make IVF more affordable through public sector involvement and insurance were noted as potential factors that could influence future practices.

Ethical Concerns:

Ethical considerations surrounding the potential overuse of ICSI were a prominent part of the discussion. The embryologists expressed concerns about the long-term implications of by-passing natural selection and the need for informed decision-making. They emphasized that ICSI should not be used indiscriminately but rather should be reserved for cases where it is clearly indicated, ensuring that ethical standards are upheld in ART practices.

The professional challenges for embryologists, including the need for experience and judgment in critical decisions, were highlighted. They should also be knowledgeable about clinical aspects like hormones and drugs, dosage, and stimulation protocols to understand factors that could affect oocyte quality and their reproductive outcomes.

Conclusion:

The combined discussions underscore the complexity of decision-making in

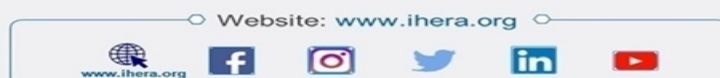
ART, particularly concerning the choice between IVF and ICSI. While ICSI is indispensable in many cases, particularly in male infertility, there is a strong argument for reserving its use for indicated situations and favoring conventional IVF when appropriate. The discussions highlight the importance of individualized treatment planning, sperm preparation techniques, and ongoing assessment of embryonic development to achieve successful ART outcomes. Economic, Ethical, and Government Policies considerations also play a significant role in shaping the practices and decisions of embryologists. The diversity of opinions and practices within the field reflects the need for ongoing research, dialogue, and tailored approaches to each patient's unique circumstances.

For Further Reading

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