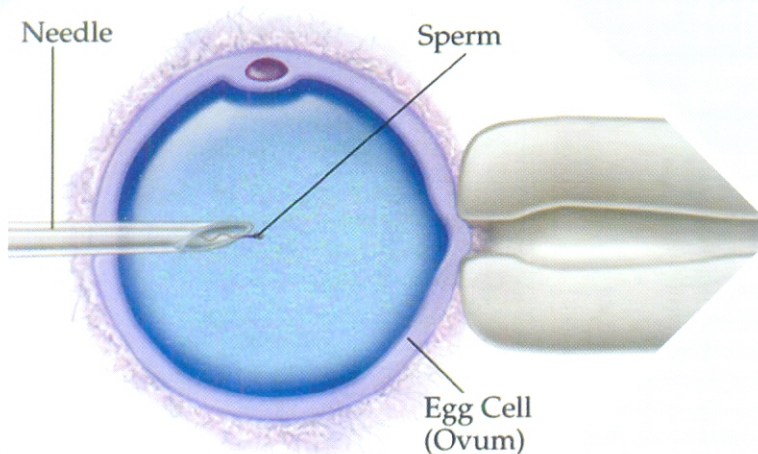




IHR

INTRA CYTOPLASMIC SPERM INJECTION (ICSI)

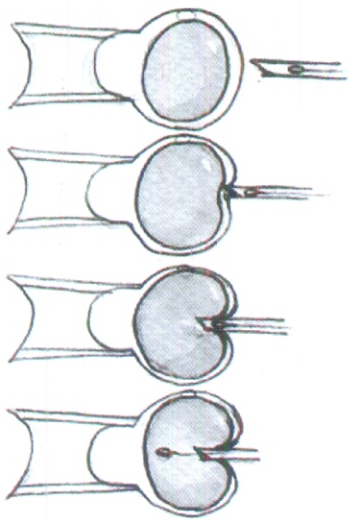


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INSTITUTE OF HUMAN REPRODUCTION

GUWAHATI • KOLKATA

INTRA CYTOPLASMIC SPERM INJECTION



Intra Cytoplasmic Sperm Injection or ICSI involves injecting a single sperm directly into the center of egg, whereas in standard IVF egg / eggs are mixed with thousands of sperm in a dish for fertilization.

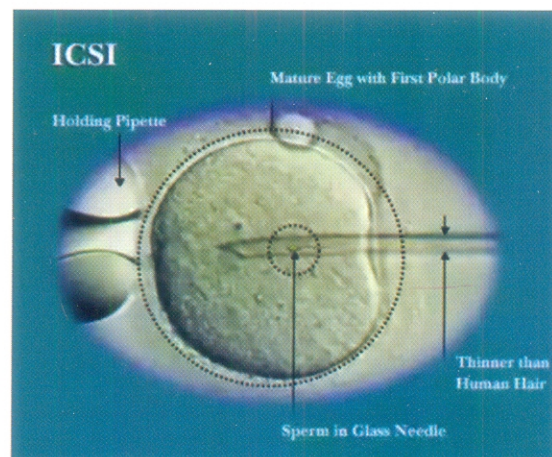
ICSI involves the use of specialized micro manipulation tools and equipments and specialized inverted microscope that enables embryologist to select and pick up one good looking sperm in a specially designed ICSI needle.

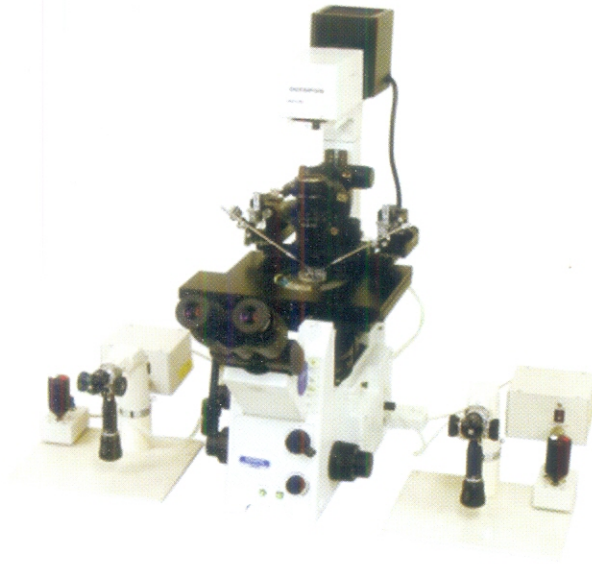
The needle is carefully advanced through the outer shell of the egg and the egg membrane and the sperm is injected into the inner part (cytoplasm) of the egg.

This usually results in fertilization of about 80 to 85 % of eggs with sperm.

However, as in standard IVF procedure, first the woman must be stimulated with hormone injections and then undergo an egg retrieval procedure (Pick up) to obtain several eggs for ICSI.

The technique was developed by G. Palermo in 1991 at The University of Brussel, Belgium. First IHR's ICSI baby was born in 1995.





INVERTED MICROSCOPE WITH MICRO-MANIPULATORS

Who Should Be TREATED WITH ICSI?

ICSI is considered absolutely necessary in the cases of severe male factor infertility such as:

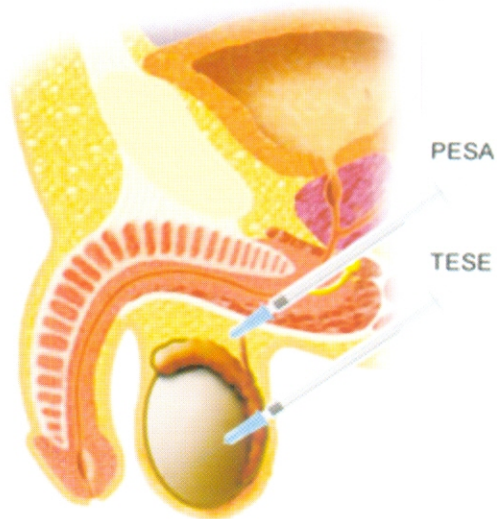
- Low sperm count: Sperm concentrations of less than 15 – 20 Million per milliliter.
- Low sperm motility: Less than 35 %.
- Very poor sperm morphology: Less than 4 %.
- Having previous IVF with no fertilization or low rate of fertilization (Low percentage of mature eggs that were normally fertilized)
- Sometimes ICSI is used for couples that have a low yield of eggs at egg pick up procedure. ICSI is being used to try to get higher percentage of eggs fertilized than with conventional insemination of the eggs (mixing eggs and sperms together).

TESE AND ICSI

Testicular Sperm Extraction (TESE) is the process of removing a small portion of tissue from the testicle under local anaesthesia or general anaesthesia. Few viable sperm cells are extracted from that sample of tissue. ICSI is performed from these sperm cells. TESE and ICSI is recommended to men who

- Cannot produce sperm by ejaculation
- Have AZOOSPERMIA

Intra Cytoplasmic Sperm Injection (ICSI) and Testicular Sperm Extraction (TESE) have reduced the need for donor sperm.



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