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Success rates with ICSI vary tremendously with the treatment center and the skill of the technologist. Preliminary data indicates that this method carries an increased risk of birth defects caused by the introduction of sperm with extra sex chromosomes. (“This risk is usually reduced in a natural fertilization process”).

Evaluating Male Infertility was adapted from materials prepared by Stanton C. Honig, MD and by Ellen Asprooth, MSJ. Dr. Honig is Assistant Clinical Professor of Urology at the University of Connecticut School of Medicine. He has a clinical practice in New Haven, CT. Ellen Asprooth is a free-lance journalist in Rochester, NY. All educational materials are reviewed by the Educational Materials Advisory Committee of Ferre Institute, Inc.

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INFERTILITY

II. Treatment of Male Infertility

Treatment of male factor infertility can be divided into two basic categories of therapy: specific therapy to improve semen quality, and assisted reproductive technologies which bring the sperm closer to the egg.

Improving Semen Quality

Many problem identified through testing can be treated to improve semen quality.

- Treatment may include changing practices such as smoking, abuse of alcohol, use of recreational drugs, exposure to harmful chemicals and regular use of hot tubs. The effects of chemotherapy on semen quality may also be reversible with time.
- Some varicoceles, varicose veins of the testis, may affect semen quality. Minor surgery to correct these varicoceles may lead to significant improvement in many men.
- Severe hormone imbalances may be treated with medication.

Blockages of the ejaculatory ducts in the epididymis may hide normal sperm production. Some blockages may be treated successfully. If correction is not possible, sperm may be retrieved from the vas deferens, epididymis or testis by needle biopsy.

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- Because of the low numbers of sperm, this procedure is almost always combined with intracytoplasmic sperm injection.
- If infection or inflammation is present in the semen, treatment with antibiotics and/or anti-inflammatory drugs may improve semen quality.
- Options for men with antisperm antibodies include medical treatment with steroids, sperm processing in conjunction with intrauterine insemination (IUI), in vitro fertilization (IVF), or ICSI.

Moving the sperm closer to the egg

Retrograde ejaculation (where sperm is ejaculated into the bladder instead of through the penis) and anejaculation (the inability to ejaculate) may be treated by medication, surgery, or medically assisted sperm retrieval.

Insemination

Placing semen in the uterus (IUI) or in the opening of the cervix at the time of ovulation is effective for some couples. When this procedure is used, ovulation is often induced by drugs.

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Husband or donor semen can be used for intracervical and intrauterine insemination: the pregnancy rate for induced ovulation with IUI is approximately 20% over six cycles.

In Vitro Fertilization

In vitro fertilization is the placement of eggs and sperm together outside the body to achieve fertilization. IVF may be suggested in non-treatable cases of male factor fertility disorders with a total moving sperm count of less than 5 million and/or severe sperm shape deformities, and failure with induced ovulation and IUI. In North America, 18.1 percent of couples will be successful in delivering a child with this procedure.

ICSI

Intracytoplasmic Sperm Injection (ICSI) is a technique in which sperm are injected directly into the main part of the egg. It can produce pregnancy in cases of infertility where in the past success was very unlikely. Indications for ICSI at present include severe male factor infertility (less than 1 million sperm), history of multiple failed IVF cycles, almost all cases of microsurgical sperm aspiration and problems with zona pellucida penetration. The procedure many also be tried in cases of antibodies bound to sperm and sperm defects that suggest low success with standard IVF.

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