

Treatment of infertility with superovulation and intrauterine insemination-SIUI

Purpose of Study

Induction of superovulation with gonadotropins and intrauterine insemination (IUI) are frequently used to treat infertility. The SIUI study evaluated the safety and effectiveness of superovulation and intrauterine insemination in couples with unexplained infertility.

Study Design

The SIUI study was a double-blind randomized trial of intracervical insemination (ICI), IUI, combined superovulation and ICI, and combined superovulation and IUI for the treatment of Infertility. The primary hypothesis was that IUI, combination of superovulation and ICI, or combination of superovulation and IUI was more likely to result in a pregnancy than ICI. The primary outcome of the study was the success of pregnancy.

Study Population

Nine hundred thirty-two couples participated in the study. The inclusion criteria for women were: 40 years old or younger, negative pregnancy test, normal pelvis and uterine cavity, "in phase" endometrial biopsy, negative serum antisperm antibody test, normal serum follicle-stimulating hormone and thyrotropin values on days 1–5 of cycle, length of 2 of the 3 most recent menstrual cycles between 24 and 40 days, History of infertility for >1 year. The inclusion criteria for men were: 55 years old or younger, negative serum antisperm antibody test, presence of any motile sperm on screening semen analysis, history of infertility for >1 year. Exclusion criteria consisted of previous infertility treatment, a history of chemotherapy or radiotherapy, previous surgery, or a medical condition related to infertility.

Treatments

The couples were randomized to one of four different treatment arms: ICI, IUI, combined superovulation and ICI, and combined superovulation and IUI. Treatment continued for four cycles unless pregnancy was achieved.

Results

Treatment with induction of superovulation and IUI is three times as likely to result in pregnancy as is ICI and twice as likely to result in pregnancy as is treatment with either superovulation and ICI or IUI alone.

Primary Reference

David S. Guzick, M.D., Ph.D., Sandra Ann Carson, M.D., Christos Coutifaris, M.D., Ph.D., James W. Overstreet, M.D., Ph.D., Pam Factor-Litvak, Ph.D., Michael P. Steinkampf, M.D., Joseph A. Hill, M.D., Luigi Mastroianni, Jr., M.D., John E. Buster, M.D., Steven T. Nakajima, M.D., Donna L. Vogel, M.D., Ph.D., and Robert E. Canfield, M.D. for the National Cooperative Reproductive Medicine Network. Efficacy of Superovulation and Intrauterine Insemination in the Treatment of Infertility. *N Engl J Med* 1999; 340:177-183, 1999.