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Microsurgical Varicocelectomy for Infertile Couples With Advanced Female Age: Natural History in the Era of ART

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Varicocele represents the most common cause of male infertility, and most reports indicate that varicocelectomy has a beneficial effect on male fertility and pregnancy outcome. Assisted reproductive technologies (ARTs) are an alternative to varicocelectomy for the management of couples with a varicocele.

The age of the female partner is important in the decision-making process; however, the true influence of female age on pregnancy outcome following varicocelectomy or ART in these couples is unknown. We evaluated the outcomes of 2 cohorts of infertile men with a varicocele and a female partner 35 years of age or older; one group selected varicocelectomy and the other a nonsurgical approach. We reviewed a group of consecutive infertile men who underwent microsurgical varicocelectomy and whose partners are 35 years of age or older (n = 110). We also reviewed a consecutive group of men with varicoceles who elected not to have surgery and whose partners are 35 years of age or older (n = 94). The outcome measures included changes in semen parameters, pregnancy rates (assisted and unassisted), and use of ART. The surgical and nonsurgical groups had comparable semen parameters and female ages. Mean sperm concentration and motility increased significantly after varicocelectomy (P < .05). At a mean of 30 months follow-up, 35% of couples in the surgical group achieved a spontaneous pregnancy and an additional 6% achieved a pregnancy via ART (20% of this group attempted ART). In the nonsurgical group, 25% achieved a spontaneous pregnancy and an additional 16% achieved a pregnancy with ART (40% of this group attempted ART). This study on the natural history of infertile men with varicocele and advanced female age suggests that the surgical and nonsurgical approaches offer comparable pregnancy outcome (combined assisted and unassisted pregnancy rates are about 40%). Overall, these data suggest that varicocelectomy is an acceptable option for couples with advanced female age, but other female factors must be considered in the decision-making process.

Key words: Male infertility, varicocele, assisted reproduction

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