Diagnostic evaluation of the infertile male: a committee opinion

Practice Committee of the American Society for Reproductive Medicine

American Society for Reproductive Medicine, Birmingham, Alabama

The purpose of this ASRM Practice Committee report is to provide clinicians with principles and strategies for the evaluation of couples with male infertility problems. This revised document replaces the document of the same name, last published in 2012 (Fertil Steril 2012;98:294–301). (Fertil Steril® 2015;103:e18–e25. ©2015 by American Society for Reproductive Medicine.)

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Approximately 8%–15% of couples are unable to conceive after 1 year of unprotected intercourse (1). A male factor is solely responsible in ~20% of infertile couples and contributes in another 30%–40% of couples (2). A male infertility factor is often defined by abnormal semen parameters but may be present even when the semen analysis is normal. The purpose of this document is to provide clinicians with principles and strategies for the evaluation of couples with male infertility problems.

GOALS OF EVALUATION

Male infertility can be due to a variety of conditions, many, but not all, of which can be identified and treated. When the cause of abnormal semen parameters cannot be identified, as is true in many patients, the condition is termed idiopathic. Rarely, patients with normal semen quality may have sperm that either are incapable of oocyte fertilization or harbor genetic abnormalities that prevent normal fetal development.

Ideally, the identification and treatment of correctable conditions will improve the male partner's fertility and allow conception to be achieved naturally. Detection of certain genetic causes of male infertility provides the opportunity to inform affected couples about the risk of transmitting genetic abnormalities that may affect the health of offspring, may affect the chance for successful treatment, and can help to guide treatment options. Evaluation of the infertile man also is aimed at identifying any underlying medical conditions that may present as infertility. Some, such as testicular cancer and pituitary tumors, can have serious health consequences if not properly diagnosed and treated (3).

INDICATIONS FOR EVALUATION

Evaluation for infertility is indicated for couples who fail to achieve a successful pregnancy after ≥12 months of regular unprotected intercourse. Earlier evaluation and treatment may be justified, based on medical history and physical findings and is warranted after 6 months for couples in which the female partner is >35 years old (4). Men having concerns about their future fertility also merit evaluation.

At a minimum, the initial screening evaluation of the male partner of an infertile couple should include a reproductive history and analysis of at least one semen sample. If the initial evaluation is abnormal, then referral to someone experienced in male reproduction is recommended.

Reproductive History

The reproductive history should include: 1) coital frequency and timing; 2) duration of infertility and previous fertility; 3) childhood illnesses and developmental history; 4) systemic medical illnesses (such as diabetes mellitus and upper respiratory diseases); 5) previous surgery; 6) medications and allergies; 7) sexual history (including sexually transmitted infections); and 8) exposures to gonadotoxins (including environmental and chemical toxins and heat). Previous fertility does not exclude the possibility of a newly acquired, secondary, male infertility factor. Evaluation is the same for men with primary infertility (never having fathered a pregnancy) and secondary infertility (having previously fathered a pregnancy).

Semen Analysis

Semen analysis is the cornerstone of the laboratory evaluation of the

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