Complete Summary

GUIDELINE TITLE

Report on optimal evaluation of the infertile male.

BIBLIOGRAPHIC SOURCE(S)

Report on optimal evaluation of the infertile male. Baltimore (MD): American Urological Association, Inc.; 2001 Apr. 14 p. [27 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
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SCOPE

DISEASE/CONDITION(S)

Male infertility

GUIDELINE CATEGORY

Diagnosis
Evaluation

CLINICAL SPECIALTY

Endocrinology
Family Practice
Internal Medicine
Medical Genetics

Obstetrics and Gynecology
Urology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To offer recommendations for the optimal diagnostic evaluation of the male partner of an infertile couple

TARGET POPULATION

Men presenting with infertility problems

INTERVENTIONS AND PRACTICES CONSIDERED

1. Reproductive history, including coital frequency and timing; duration of infertility and prior fertility; childhood illnesses and developmental history; systemic medical illnesses, such as diabetes mellitus and upper respiratory diseases, and prior surgeries; sexual history including sexually transmitted infections; and gonadal toxin exposure including heat
2. Two semen analyses, preferably one month apart
3. Medical history, including complete medical and surgical history; prescription and non-prescription medications and allergies; review of systems; family reproductive history; and survey of past infections
4. Physical examination, including examination of the penis and the location of the urethral meatus; palpation of the testes and measurement of their size; presence and consistency of both the vasa and epididymides; presence of a varicocele; secondary sex characteristics, including body habitus, hair distribution and breast development; and digital rectal examination
5. Endocrine evaluation, including measurements of serum follicle-stimulating hormone (FSH), serum testosterone levels, serum luteinizing hormone (LH) and prolactin levels
6. Post ejaculatory urinalysis
7. Transrectal or scrotal ultrasonography
8. Other specialized clinical tests on semen and sperm, such as quantitation of leukocytes in semen, tests for antisperm antibodies, sperm viability tests, tests of sperm-cervical mucus interaction, sperm penetration assay, computer-aided sperm analysis, sperm creatine kinase, and reactive oxygen species (considered but not recommended for routine evaluation)
9. Genetic screening, including cystic fibrosis gene mutations, karyotypic chromosomal abnormalities, and Y-chromosome microdeletions

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This guideline document was submitted for peer review by 125 physicians and researchers from the disciplines of urology, gynecology, reproductive endocrinology, primary care and family medicine, andrology and reproductive laboratory medicine. Modifications were made by the Practice Committee of the American Society of Reproductive Medicine. After the final revisions were made based upon the peer review process and the Practice Committee of the American Society of Reproductive Medicine, the documents were submitted to, and approved by the Board of Directors of the American Urological Association and the Board of Directors of the American Society of Reproductive Medicine.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

When to Do an Evaluation for Infertility

An initial screening evaluation of the male partner of an infertile couple should be done if pregnancy has not occurred within one year of unprotected intercourse. An earlier evaluation may be warranted if a known male or female infertility risk factor exists or if a man questions his fertility potential. The initial evaluation for male factor infertility should include a reproductive history and two properly performed semen analyses.

A full evaluation by a urologist or other specialist in male reproduction should be done if the initial screening evaluation demonstrates an abnormal male reproductive history or an abnormal semen analysis. Further evaluation of the male partner should also be considered in couples with unexplained infertility and in couples in whom there is a treated female factor and persistent infertility.

Required Components of a Full Evaluation for Male Infertility

The minimum full evaluation for male infertility for every patient should include a complete medical history, physical examination by a urologist or other specialist in male reproduction and at least two semen analyses. Additional procedures and tests, used to elucidate problems discovered by the full evaluation, may be suggested later as well.

Other Procedures and Tests for Assessing Male Fertility

An initial endocrine evaluation should include at least a serum testosterone and follicle-stimulating hormone (FSH). It should be performed if there is: (1) an abnormally low sperm concentration, especially if less than 10 million/ml; (2) impaired sexual function; or (3) other clinical findings suggestive of a specific endocrinopathy.

A post-ejaculatory urinalysis should be performed in patients with ejaculate volumes of less than 1 ml, except in patients with bilateral vasal agenesis or clinical signs of hypogonadism.

Transrectal ultrasonography is indicated in azoospermic patients with palpable vasa and low ejaculate volumes to determine if ejaculatory duct obstruction exists. Some experts recommend transrectal ultrasonography for oligospermic patients with low volume ejaculates, palpable vasa and normal testicular size, to determine if ejaculatory duct obstruction is present.

Scrotal ultrasonography is indicated in those patients in whom physical examination of the scrotum is difficult or inadequate or in whom a testicular mass is suspected.

Specialized tests on semen are not required for diagnosis of male infertility. They may be useful in a small number of patients for identifying a male factor contributing to unexplained infertility, or for selecting therapy, such as assisted reproductive technology.

Less commonly used specialized tests on semen are important investigative tools, but are not necessary for the routine evaluation of men with infertility.

Genetic testing for the cystic fibrosis transmembrane conductance regulator (CFTR) mutations in the female partner should be offered before proceeding with treatments that utilize the sperm of men with congenital bilateral absence of the vasa deferentia.

Men with non-obstructive azoospermia and severe oligospermia (less than 5-10 million sperm/ml) should be informed of the potential genetic abnormalities associated with azoospermia or severe oligospermia.

Karyotyping and Y-chromosome analysis should be offered to the male who has nonobstructive azoospermia or severe oligospermia prior to performing intracytoplasmic sperm injection. Genetic counseling may be offered whenever a genetic abnormality is suspected in either the male or female partner and should be provided whenever a genetic abnormality is detected.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Identification and treatment of reversible conditions may improve the male's fertility and allow for conception through intercourse. Detection of conditions for which there is no treatment will spare couples the distress of attempting ineffective therapies. Detection of certain genetic causes of male infertility allows couples to be informed about the potential to transmit genetic abnormalities that may affect the health of an offspring. Thus, an appropriate male evaluation may allow the couple to better understand the basis of their infertility and to obtain genetic counseling when appropriate. If specific corrective treatment is not available, it still may be possible to employ assisted reproductive techniques such as testicular or epididymal sperm retrieval with intracytoplasmic sperm injection. Alternatively, such couples may consider therapeutic donor insemination or adoption. Finally, male infertility may occasionally be the presenting manifestation of an underlying life-threatening condition. Failure to identify diseases such as testicular cancer or pituitary tumors may have serious consequences, including, in rare cases, death.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This report is intended to provide medical practitioners with a consensus of principles and strategies for the care of couples with male infertility problems. The report is based on current professional literature, clinical experience and expert opinion. It does not establish a fixed set of rules or define the legal standard of care and it does not pre-empt physician judgment in individual cases. Physician judgment must take into account variations in resources and in patient needs and preferences. Conformance with this Best Practice Policy cannot ensure a successful result.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Report on optimal evaluation of the infertile male. Baltimore (MD): American Urological Association, Inc.; 2001 Apr. 14 p. [27 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Apr

GUIDELINE DEVELOPER(S)

American Society for Reproductive Medicine - Private Nonprofit Organization
American Urological Association Education and Research, Inc. - Medical Specialty Society

GUIDELINE DEVELOPER COMMENT

This document was written by the Male Infertility Best Practice Policy Committee of the American Urological Association, Inc. (AUA) and the Practice Committee of the American Society for Reproductive Medicine (ASRM). The two organizations agreed to collaborate to prepare documents of importance in the field of male infertility. The Male Infertility Best Practice Policy Committee was created in 1999 by the Board of Directors of the American Urological Association, Inc.®

SOURCE(S) OF FUNDING

American Urological Association, Inc. (AUA)

GUIDELINE COMMITTEE

Male Infertility Best Practice Policy Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Committee members received no remuneration for their work. Each member of the Committee provided a conflict of interest disclosure to the American Urology Association (AUA).

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Urological Association, Inc. (AUA) Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available for physicians to distribute to patients:

- A basic guide to male infertility. How to find out what´s wrong. Baltimore (MD): American Urological Association, Inc, 2001. Available in Portable Document Format (PDF) from the American Urological Association, Inc. Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline´s content.

NGC STATUS

This NGC summary was completed by ECRI on November 7, 2001. The information was verified by the guideline developer as of December 24, 2001.

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