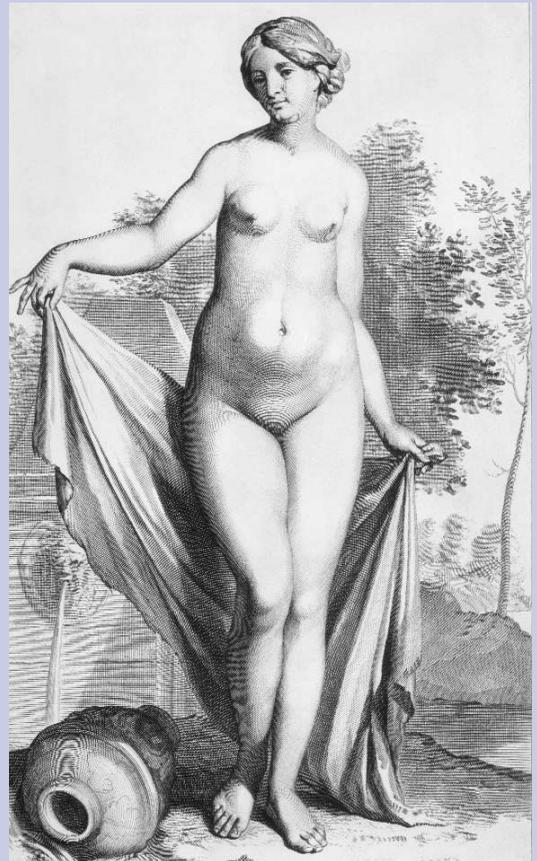


AIUM Standard for the Performance of Saline Infusion Sonohysterography



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The American Institute of Ultrasound in Medicine (AIUM) is an educational, scientific, and professional society concerned with the advancement of the art and science of ultrasound in medicine and research. To promote this mission, the AIUM is pleased to publish, in conjunction with the American College of Obstetricians and Gynecologists (ACOG) and the American College of Radiology (ACR), this Standard for the Performance of Saline Infusion Sonohysterography. We are indebted to the many volunteers who contributed their time, knowledge, and energy to bringing this document to completion.

The AIUM represents the entire range of clinical and basic science interests in medical diagnostic ultrasound and with hundreds of volunteers, the AIUM has promoted the safe and effective use of ultrasound in clinical medicine for more than 50 years. This document, and others like it, will continue to advance this mission.

Clinical Standards of the AIUM are intended to provide the medical ultrasound community with guidelines for the performance and recording of high quality ultrasound examinations. The standards reflect what the AIUM considers the minimum criteria for a complete examination in each area, but are not intended to establish a legal standard of care. AIUM-accredited practices are expected to generally follow the standards with the recognition that deviations from the standards will be needed in some cases, depending on patient needs and available equipment. Practices are encouraged to go beyond the standards to provide additional service and information as needed by their referring physicians and patients.



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I. Introduction

The clinical aspects of this standard (Indications and Contraindications, Specifications of the Examination, and Equipment Specifications) were developed collaboratively by the American Institute of Ultrasound in Medicine (AIUM), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Radiology (ACR). Recommendations for physician qualifications, procedure documentation, and quality control may vary between, and may be addressed by, each of these organizations.

This standard has been developed to serve as a guideline and to provide assistance to qualified physicians performing saline infusion sonohysterography. Properly performed sonohysterography can provide information about the uterus and endometrium. Additional studies may be necessary for complete diagnosis. However, adherence to the following standard will maximize the diagnostic benefit of sonohysterography.

II. Definition

Saline infusion sonohysterography (SIS) consists of sonographic imaging of the uterus and uterocervical cavity, using real-time sonography during injection of sterile saline into the uterine cavity.

III. Goal

The goal of sonohysterography is to detect abnormalities of the uterus and endometrium using real-time sonography and static images with sufficient anatomic detail for diagnosis of normal and abnormal findings.

IV. Indications and Contraindications

A. Indications

The most common indication for sonohysterography is abnormal uterine bleeding in both premenopausal and postmenopausal women; other indications include but are not limited to:

1. Infertility and habitual abortion.
2. Congenital abnormalities and/or anatomic variants of the uterine cavity.
3. Preoperative and postoperative evaluation of the uterine cavity, especially with regard to uterine myomas, polyps, and cysts.
4. Suspected uterine cavity synechiae.
5. Further evaluation of suspected abnormalities as seen on endovaginal sonography, including focal or diffuse endometrial thickening or debris.
6. Inadequate imaging of the endometrium by endovaginal sonography.

B. Contraindications

Sonohysterography should not be performed in a woman who is pregnant or who could be pregnant. This is usually avoided by scheduling the examination in the follicular phase of the menstrual cycle, after menstrual flow has essentially ceased, but before the patient has ovulated. In a patient with regular cycles, the SIS should not in most cases be performed later than the tenth day of the menstrual cycle. Sonohysterography should not be performed in patients with a pelvic infection or unexplained pelvic tenderness, which may be due to chronic pelvic inflammatory disease (PID). Pelvic organ tenderness should be assessed during the preliminary endovaginal sonogram. Active vaginal bleeding is not a contraindication to the procedure but may make the interpretation more challenging.



V. Qualifications and Responsibilities of the Physician

See the AIUM Official Statement: *Training Guidelines for Physicians Who Evaluate and Interpret Diagnostic Ultrasound Examinations* and the *AIUM Standards and Guidelines for the Accreditation of Ultrasound Practices*.

VI. Specifications of the Examination

A. Patient Preparation

The referring physician may elect to prescribe prophylactic antibiotics if patients routinely take these for other invasive procedures. If painful, dilated, and/or obstructed fallopian tubes are found prior to saline infusion, and the patient is not taking prophylactic antibiotics, the examination should be delayed until treatment can be administered. In the presence of nontender hydrosalpinges, consideration may be given to administering antibiotics at the time of the examination. A pregnancy test is advised when clinically indicated. Patients should be questioned about latex allergy prior to use of a latex sheath.

B. Procedure

A preliminary unenhanced endovaginal sonogram with measurements of endometrium and evaluation of the uterus and ovaries should be performed prior to SIS. After cleansing the external os, the cervical canal and/or uterine cavity should be catheterized using aseptic technique, and sterile saline should be administered under real-time sonographic imaging. Imaging should include real-time scanning of the endometrial and cervical canal.

C. Contrast Agent

Sterile saline should be used for sonohysterography.

D. Images

Appropriate images, in at least 2 planes, using a high-frequency endovaginal ultrasound probe should be produced and recorded to demonstrate normal and abnormal findings. Precatheterization images should be obtained including the thickest bi-layer endometrial measurement on a sagittal image. The uterine cavity is filled with saline, and representative images with a complete survey of the uterine cavity are obtained as necessary for diagnostic evaluation. If a balloon catheter is employed for the examination, images should be obtained at the end of the procedure with the balloon deflated to fully evaluate the endometrial cavity, and particularly the cervical canal and lower uterine segment.

VII. Documentation

Adequate documentation is essential for high-quality patient care. There should be a permanent record of the ultrasound examination and its interpretation. Comparison with prior relevant imaging studies may prove helpful. Images of all appropriate areas, both normal and abnormal, should be recorded. Variations from normal size should be accompanied by measurements. Images are to be labeled with the examination date, patient identification, and image orientation. A report of the ultrasound findings should be included in the patient's medical record. Retention of the ultrasound examination images should be consistent both with clinical need and with relevant legal and local health care facility requirements.

Reporting should be in accordance with the *AIUM Standard for Documentation of an Ultrasound Examination*.



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VIII. Equipment Specifications

Saline infusion sonohysterography must be conducted with an endovaginal transducer. In cases of an enlarged uterus, additional transabdominal images may be required to fully evaluate the endometrium. The transducer should be adjusted to operate at the highest clinically appropriate frequency under the ALARA (as low as reasonably achievable) principle.

IX. Quality Control and Improvement, Safety, Infection Control, and Patient Education and Concerns

All transducers should be cleaned after use. Vaginal transducers should be covered by a protective sheath prior to insertion. Sterile coupling gel should be used. Following the examination, the sheath should be disposed of and the transducer cleaned in an antimicrobial solution. The type of solution and amount of time for cleaning depends on manufacturer and infectious disease recommendations.

Policies and procedures related to quality, patient education, infection control, and safety should be developed and implemented in accordance with the *AIUM Standards and Guidelines for the Accreditation of Ultrasound Practices*. Equipment performance monitoring should be in accordance with the *AIUM Standards and Guidelines for the Accreditation of Ultrasound Practices*.

Acknowledgments

This standard was developed by the American Institute of Ultrasound in Medicine (AIUM) in collaboration with the American College of Obstetricians and Gynecologists (ACOG) and the American College of Radiology (ACR) according to the process described in the ACR Book of Standards.

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