

**DIAGNOSTIC  
HYSTEROSCOPY  
IN THE OFFICE**

*as practiced by  
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M.D., M.P.H.*

## **OFFICE DIAGNOSTIC HYSTEROSCOPY as Practiced by James M. Wheeler, M.D., M.P.H.**

### **I. Introduction**

Advances in hysteroscopes, light sources, video systems and uterine distention systems have made diagnostic hysteroscopy in the office as tenable as established office procedures such as colposcopic guided biopsies and D&C. This outline serves as a practice guide for the physician establishing his/her own office hysteroscopic unit, and assumes established training and experience in operating room hysteroscopy.

### **II. Indications and Contraindications**

- A. Indications to visualize the endometrial cavity and endocervical canal:
1. Primary infertility: 10% of infertile women will have an identifiable lesion at hysteroscopy. The diagnosis of "unexplained infertility" may no longer be applied without a demonstrably normal cavity at hysteroscopy.
  2. Uterine cavity screening prior to assisted reproductive technologies: most IVF programs require normal cavity assessment within one year of cycle.
  3. Repeated pregnancy loss and secondary infertility.
  4. Abnormal/inconclusive hysterosalpingogram.
  5. Unexplained uterine bleeding. (If suspicion of malignancy exists, office hysteroscopy should be preceded by a normal endometrial biopsy.)
- B. Contraindications:
1. Absolute contraindications:
    - a. pregnancy
    - b. genital infection
    - c. genital cancer
  2. Relative contraindications:
    - a. heavy uterine bleeding
    - b. cervical stenosis
    - c. severe medical comorbidity
    - d. patient anxiety
    - e. operator inexperience

### **III. Equipment**

- A. Procedure room
- A typical examination room with table, changing area, sink, and sufficient space for instruments, assistant and accompanying person.
1. Soak box for hysteroscope.
  2. Exam table with light (halogen preferred).
  3. Uterine dressing forceps.
  4. Cervical dilators to 6mm.
  5. Tenaculum.
  6. Sterile 4x4 sponges.
  7. Saline bottles.
- B. Hysteroscope
- Each physician will have tried various instruments in the operating room prior to selecting one for office use. The office hysteroscope should be small, with the outer diameter less than 5 mm. Most physicians prefer CO<sub>2</sub> for distention, although lactated Ringer's or Hyskon are advocated by some.
- C. Uterine distention devices
- Only devices specifically designed for uterine distention are used. Patient comfort is directly related to uterine distention pressure and speed of distention. Using CO<sub>2</sub>, good visualization is possible at 50 mm Hg, and our standard settings are a flow of 75 ml/min

and pressure of 75 mm Hg. Tubal insufflation is unusual, and shoulder pain minimized, if pressures are kept less than 100 mm Hg. Liquid distention by lactated ringer's or Hyskon is typically delivered by gentle application via 50 cc syringes, with just enough pressure applied to allow visualization.

D. Equipment care

All manufacturers will provide specific guidelines for instrument care, and should be followed closely. The hysteroscope and light cable are soaked in Cidex for 30 minutes, and removed immediately prior to use and amply rinsed with sterile saline. Other sterile instruments are sterilized in an office autoclave and set out on sterile towels. Classic sterile technique is observed during equipment handling and performance of office diagnostic hysteroscopy.

E. Emergency cart

A proper emergency cart should be immediately available for office procedures, including diagnostic hysteroscopy. The most common "emergency" is a vagal reaction usually treatable by discontinuing the procedure and rarely administering atropine. However, the cart should have airways, a ventilation bag, IV lines/bags and resuscitation drugs. The entire cart should be regularly checked, and practice "emergencies" conducted with the staff and physicians performing office diagnostic hysteroscopy.

F. Equipment

Mobile tray or cart (or built in cabinet), hysteroscopic light source, hysteroflator, video box, recorder/printer.

#### IV. Technique

A. Physician preparation

The office hysteroscopist should already be well versed in operating room hysteroscopy, including instrumentation, uterine distention choices, indications/contraindications and complications including their management. A gentle, yet timely approach minimizes patient discomfort.

B. Patient selection

Most women are amenable to the cost/time benefits of an office-based procedure over even one-day hospitalization. However, especially sensitive patients may not tolerate any office procedure well. Typically, office hysteroscopy is performed on cycle days 5-12. In the presence of heavy bleeding, the patient is usually rescheduled a few days hence. Informed consent should be obtained and recorded in the chart. We cite a 1% risk of reaction or complication; we include discussion of the very rare perforation or severe reaction.

C. Premedication

One hour before procedure time, patients are prescribed oxazepam (Serax) 15-30 mg depending on temperament and size, and one Anaprox DS. We give doxycycline 100 mg twice daily the day before and the day of the hysteroscopy. Patients are allowed a light breakfast on the day of the procedure, but are encouraged to be NPO several hours prior to hysteroscopy. We usually schedule the procedures in the afternoon so patients can go home and rest after working a half day; virtually everyone returns to work the next morning.

D. Patient positioning

Standard hospital gown and cover-ups are used. Foot stirrups are standard, although knee stirrups are more comfortable for longer procedures. A support person who has their own rolling stool next to the patient is a real plus for reducing anxiety and understanding the findings of the procedure.

#### E. Procedure

The patient is placed in the dorsal lithotomy position after emptying her bladder and changing into a gown. A vaginal speculum is placed and the cervical os cleansed with Betadine (or Hibiclens if iodine-allergic). The physician changes to sterile gloves, and amply rinses the hysteroscope directly from the sterilization tray. The physician will have some idea as to how amenable the cervix will be to direct insertion of the endoscope. If difficulty is anticipated, a paracervical block with 5 cc of 1% xylocaine at 12, 4 and 8 o'clock is performed. Then after waiting a full 2 minutes, a tenaculum is applied to the anterior lip and the cervical canal straightened. The hysteroscope has been flushed with the CO<sub>2</sub> line, and is gently inserted under direct video guidance with CO<sub>2</sub> flowing. Bubbling usually resolves with a few seconds of patience. A standardized viewing protocol is followed, starting with the uterine apex, left ostium, posterior wall, right ostium, anterior wall and careful inspection of the cervical canal on withdrawal. Patients rest 15 minutes or more if necessary prior to rising and dressing. Uterine cramping dissipates quickly; a nonsteroidal analgesic is provided for the first evening. A detailed diagram of findings is made, and discussed with the patient. Video recordings are made for teaching purposes of interesting cases, although video display is standard during office hysteroscopy.

The assistant prepares the instruments, room and patient. A gentle approach with the patient helps patient/family anxiety. Whereas, the total procedure takes less than 5 minutes, the assistant requires 20-30 minutes per procedure for set-up and break-down.

#### V. Complications

All complications observed at operating room hysteroscopy are possible with office hysteroscopy, but at a much lower risk. In over 7 years, we have performed over 400 office hysteroscopies with one vagal reaction sufficient to stop the procedure (a gynecologic oncologist's wife), one reaction to Hyskon (a radiologist's wife), and no perforations or lacerations. We have been unable to enter the cavity in one very nervous patient. The tenaculum is used in perhaps 15% of cases, and paracervical block or cervical dilatation rarely due to case selection.

#### VI. Troubleshooting

- A. Practice the whole set-up prior to performing the first office hysteroscopy. The physician and assistant should do all that is possible to assure a smooth-flowing quick procedure that minimizes patient discomfort.
- B. Have all equipment available. Don't let the assistants "play the odds" and not have tenacula/dilators/paracervical anesthetics available.
- C. Know your equipment. The most common reasons for "I can't see!!" are:
  - Bubbles: wait, they'll clear in a few seconds.
  - Empty CO<sub>2</sub> cartridge (check the gauge prior to entry).
  - Light source is off.
  - "Someone changed the video channel".
  - Camera not firmly attached.

These are the reasons I've personally experienced, with the philosophy of trying to do everything the same way, everytime.

- D. The tight cervix is managed by tenaculum, dilatation and paracervical blockade. The patulous cervix can be occluded around the hysteroscope with the tenaculum over local anesthesia, or using Hyskon for uterine distention.
- E. Move gently, but deliberately. Explain all contact to the patient. Don't forget her support person, who may not realize that disinhibition from the premedication may make the patient more prone to express pain she normally would not.

**VII. Summary**

Office diagnostic hysteroscopy will be an increasingly common procedure over the next few years, due to concomitant advances in instrumentation, clinical experience, and economic pressures to move procedures into the office setting when possible. Complications are rare, and patient acceptance good. However, the procedure must be mastered by the physician and staff to minimize risk and maximize benefit to the woman undergoing office hysteroscopy.