ASRM AP3G Example Procedure Protocol

HYSTEROSALPINGOGRAM

Advanced Practice Provider Professional Group of the American Society for Reproductive Medicine

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Indications

1. **Evaluation of uterus and fallopian tubes**
    a. Infertility
    b. Follow-up of sterilization procedures
    c. Pelvic pain
    d. Irregular menstrual cycles
    e. Irregular vaginal bleeding
    f. Congenital abnormalities and/or anatomic variants
    g. Patients prior to or after tubal surgery, selective salpingography, and tubal recanalization or other intervention
    h. Postoperative uterine cavity assessment
    i. Patients prior to treatment with assisted reproductive technologies
    j. Delineation of submucosal uterine fibroids
    k. Thickened or irregular endometrium
    l. Sequelae of ectopic pregnancy

Contraindications

1. Suspicion of pelvic inflammatory disease or other vaginal infection
    a. Symptoms of cervicitis
    b. Pelvic tenderness
    c. Abnormal vaginal discharge
2. Active vaginal bleeding
    a. Spotting is acceptable
3. Possibility of pregnancy and no recent pregnancy test
4. Allergy to iodine or contrast dye
5. Known hydrosalpinx is a relative contraindication. Patients should be prescribed prophylactic antibiotics if there is a known hydrosalpinx

Risks

1. Light bleeding after the procedure
2. Risk of infection is rare
3. Perforation extremely rare

Pre-procedure

1. Scheduled early follicular phase (CD 5-12) or at any time on oral contraceptive pills. They patient should no longer be bleeding from menses, lining should be thin and possibility of

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pregnancy minimized. The procedure should be performed prior to ovulation and appropriate dates for testing should be adjusted if the patient experiences shorter cycles
    a. Serum pregnancy test since first day of last menstrual period OR urine pregnancy test required on day of procedure (even in patients with no possibility of pregnancy ex TDI)
2. Patients should take 800 mg ibuprofen 1 hour prior to procedure. Acetaminophen 1000 mg is appropriate alternative in those who cannot tolerate Tylenol
3. Confirm no allergies to Latex, Omnipaque or Betadine. If latex or betadine allergies are present, the room will be prepared with the latex-free TVUS probe cover for latex allergy, and a 2–4% chlorhexidine gluconate for alternative cervical prep for those with allergies to Betadine. If omnipaque allergy is present, pt will need an alternative tubal assessment modality

Procedure

1. Provider and medical assistant don lead apron and dosimeter
2. Provider to review expectations, risks and alternatives and obtain verbal consent to proceed. A "time out" should be performed per practice specific policy. Pt to assume lithotomy position
3. Provide dons STERILE gloves
4. Speculum is inserted and cervix prepped with betadine in the usual fashion.
    a. Lidocaine prep may be performed to aid in pain relief (see "Cervical Block SOP")
5. 10 cc Omnipaque drawn up using sterile technique. Cannula should be primed.
6. Catheter placed in to the cervix. Tenaculum used per provider discretion. Dilators or alternative catheter used as needed to assist in cannulation of cervix.
7. C-arm maneuvered over abdominal area and oriented appropriately
8. Scout image obtained to ensure proper positioning
9. Slow injection of contrast is initiated. Slow injection will minimize discomfort, tubal spasm and to avoid intravasation and rapid intraperitoneal spill which may complicate interpretation. Assistant is instructed to capture images per practice-specific technique.
10. An additional 10 cc of omnipaque may be prepared in the sterile fashion if required.
11. Care should be taken to minimize the radiation exposure for each procedure. Doses should be as low as reasonably possible while also obtaining correct images which include:
    a. Scout film
    b. Early cavity fill
    c. Full cavity fill/initial tubal fill
    d. Final tubal spill/dispersion
    e. If balloon catheter used, a final image should be obtained after the balloon is deflated

Post-procedure

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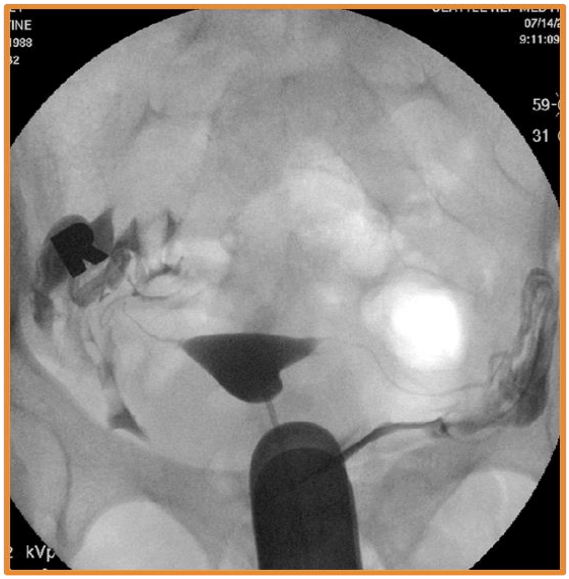
1. After the procedure is complete, the patient may sit up, or remain supine for additional discussion of the results. Should symptoms of a vasovagal reaction occur (ex. nausea, dizziness, flushing), return the patient to supine and symptoms will typically resolve with time, cool pack, and juice/crackers.
2. Patient will be provided with a sanitary pad/wash cloth and post-procedure instructions, including expectations for bleeding/pain management and to minimize infection risks.
    a. Avoid intercourse/tampons/douching for 24-48 hours. These recommendations may vary. Please refer to practice guidelines
    b. Call with the following:
        i. Heavy bleeding
        ii. Severe abdominal pain
        iii. Fever/chills
        iv. Abnormal vaginal discharge
3. Provider reviews results briefly with patient. If there are inconclusive or abnormal findings, the final plan will be set by the Provider of Record after direct review of the OH recording.
4. Patient advised to reach out to their care team with any additional questions or concerns.
5. Provider to document findings appropriately per individual practice guidelines. Findings should be descriptive and note exactly what is observed by the provider
    a. Normal HSG



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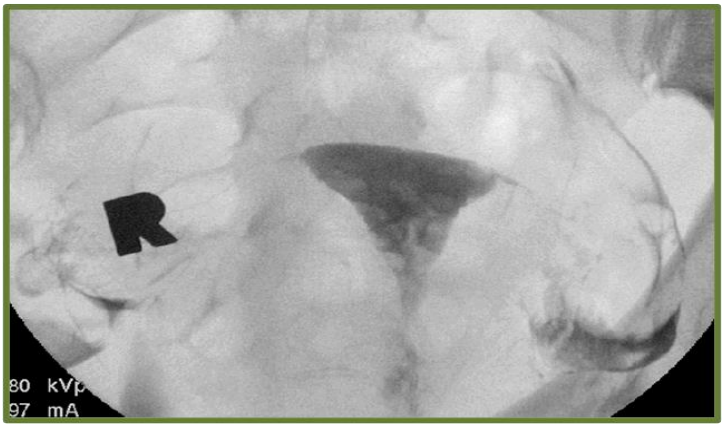
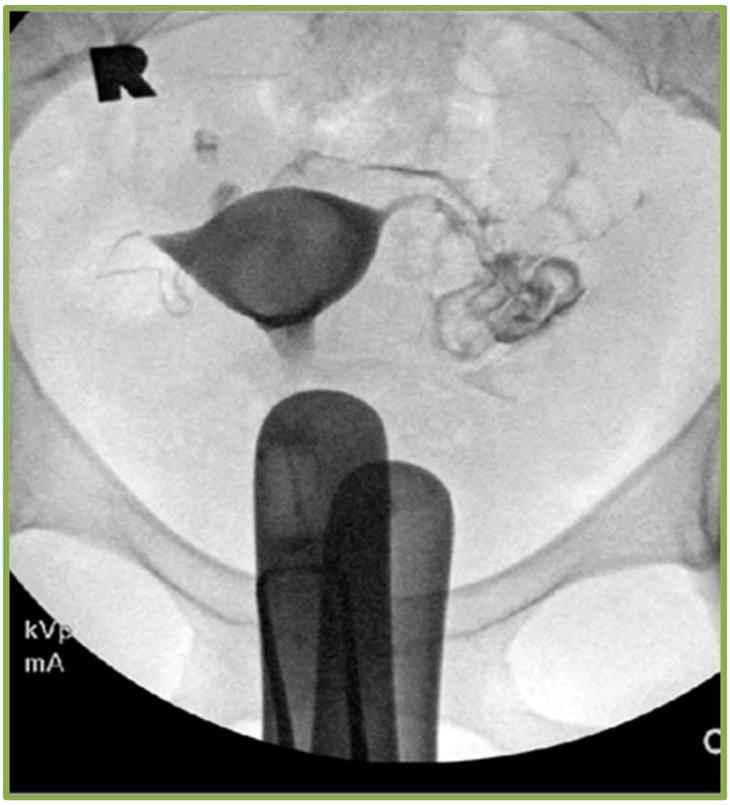
b. Filling defects- note size, location and what the findings suggest. Examples:
    i. Rounded filling defect in the (location), suggestive of intrauterine polyp



    ii. Intracavity filling defect (note size/location), and additional contrast required to distend cavity.



c. Septate vs bicornuate- septum vs bicornuate may be difficult to distinguish on HSG- recommend MRI or 3D US. Examples
    i. The cavity fills with a small triangular shaped indent of the fundus, suggestive of arcuate uterus vs septum

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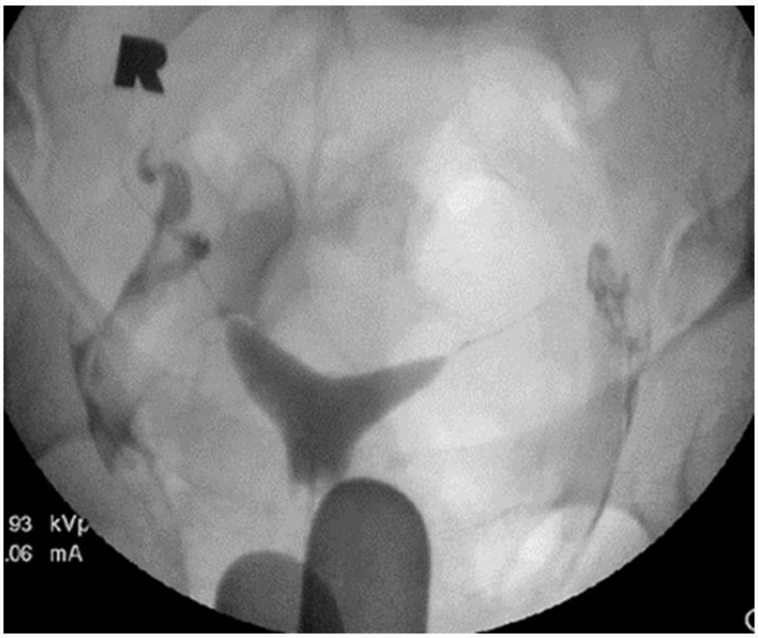
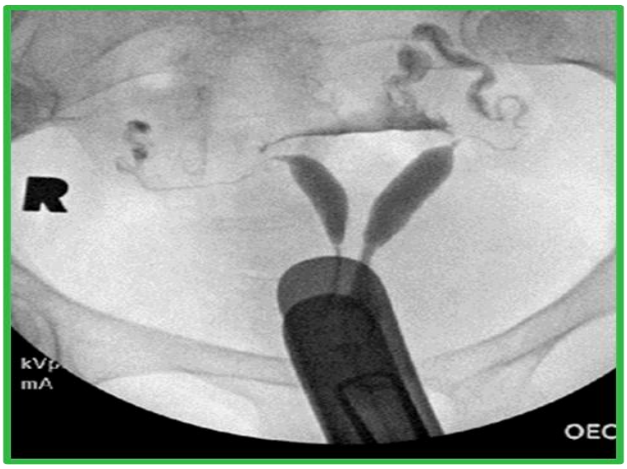


ii. The cavity fills as two symmetric horns, suggestive of septate vs bicornuate uterus



iii. The cavity fills as two distinct, closely approximated symmetric uterine horns, suggestive of septum. Cannot r/o bicornuate.

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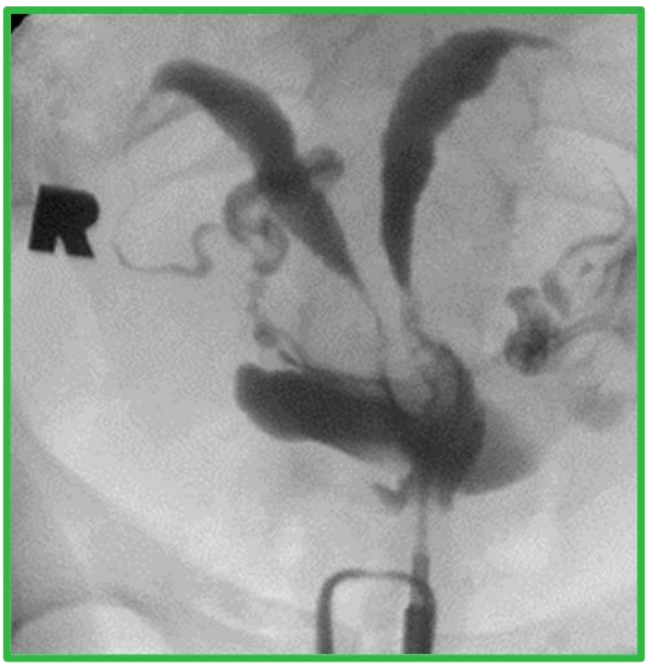
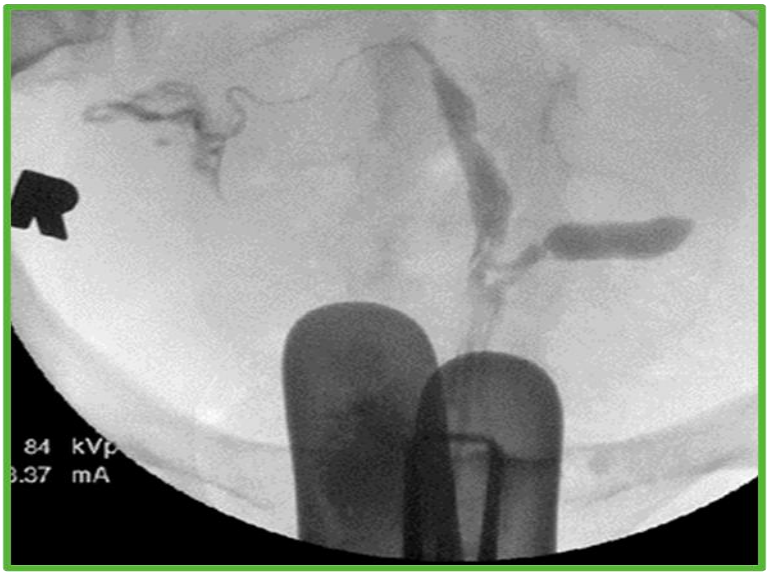


iv. The cavity fills as two distinct, symmetric divergent uterine horns. The angle between is suggestive of a bicornuate uterus.



6. Unicornuate vs didelphys
    a. Unicornuate
        i. The cavity fills as a single elongated cavity deviated to the (right/left) with a single fallopian tube (document fill/spill). Only a single cervix is seen on exam.

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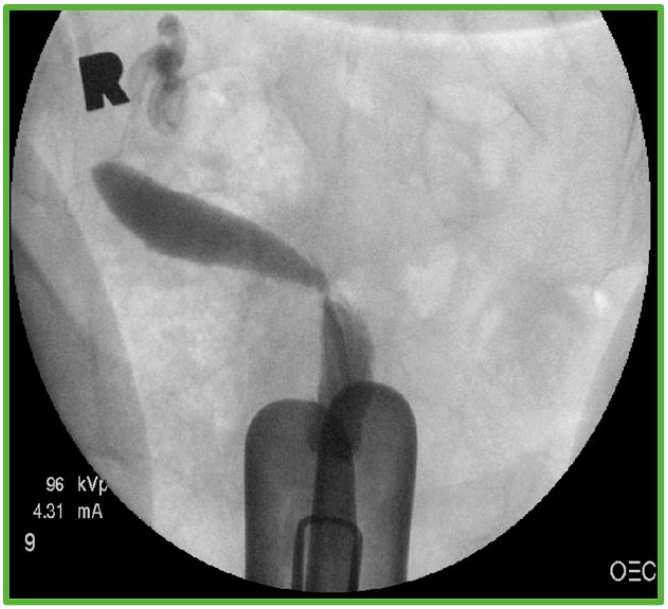
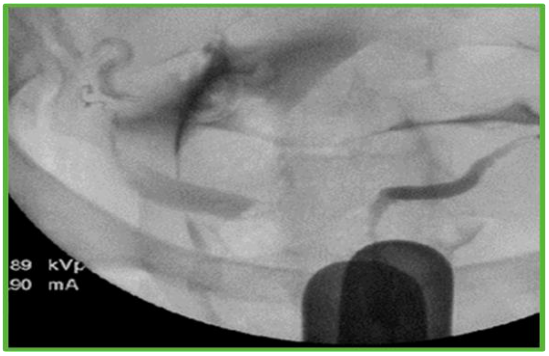
ii. Impression: (Right/left) unicornuate, MRI may be considered to identify a non-communicating horn and to r/o a didelphys.



b. Didelphys

i. Two cervixes are recognized and cannulated for exam (document location and difficulty of identifying each cervix). HSG demonstrates two distinct, widely divergent uterine cavities, each with fallopian tube. (document fill/spill for each).



7. Additional findings:

a. Borders of cavity are irregular with small diverticula, suggestive of adenomyosis

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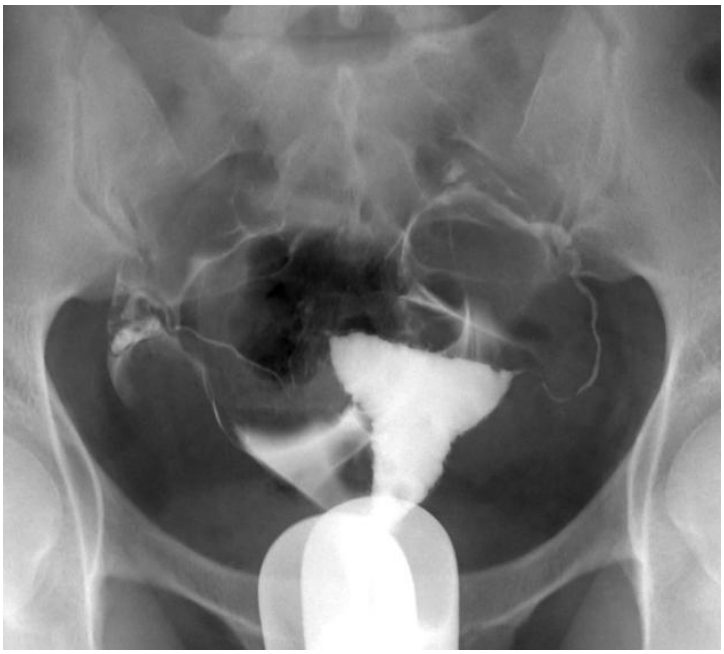
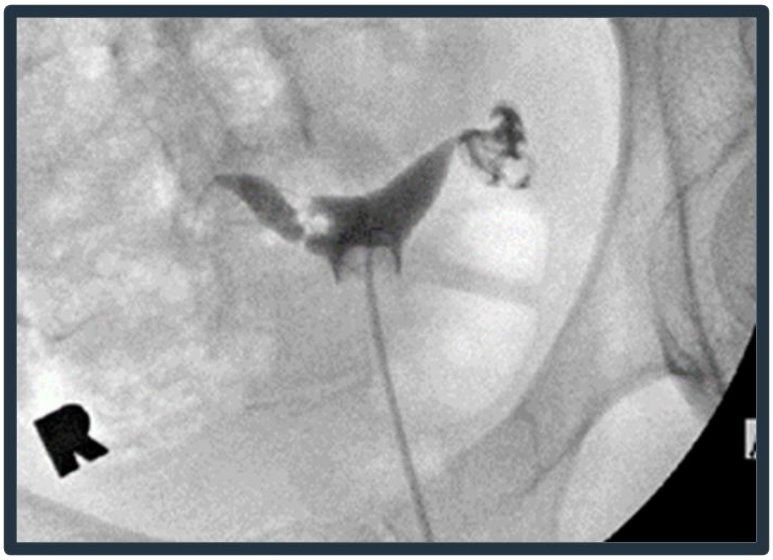


b. Irregular filling defect (note location), suggestive of potential adhesion



c. Small circular filling defects in early fill move and clear, c/w air bubbles rather than true filling defect

8. Tubes
    a. No tubal fill or spill, despite additional time and contrast. Proximal obstruction vs tubal spasm.

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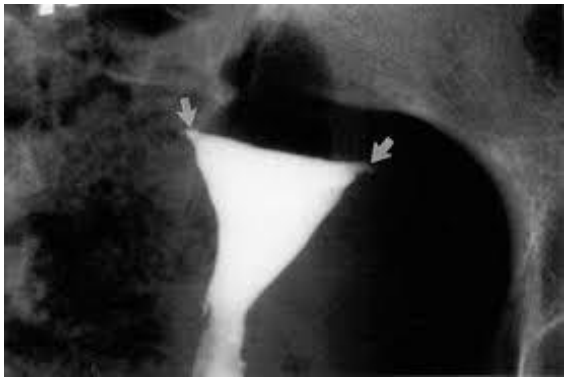
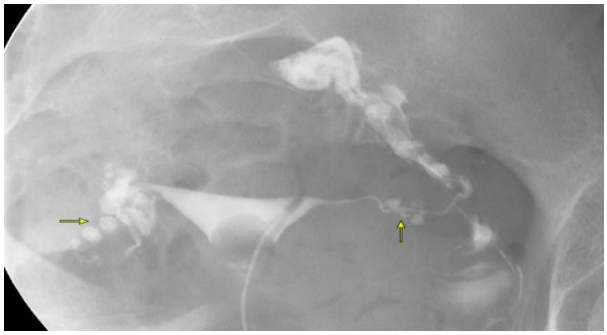


b. The (right/left) tube demonstrates prompt fill, with distal dilation and no spill. Appearance suggestive of hydrosalpinx.

c. The (right/left) tube fills with small diverticular along the isthmic portion, suggestive of salpingitis isthmica nodosa (SIN).



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Images courtesy of Tamara Tobias, Seattle Reproductive Medicine

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