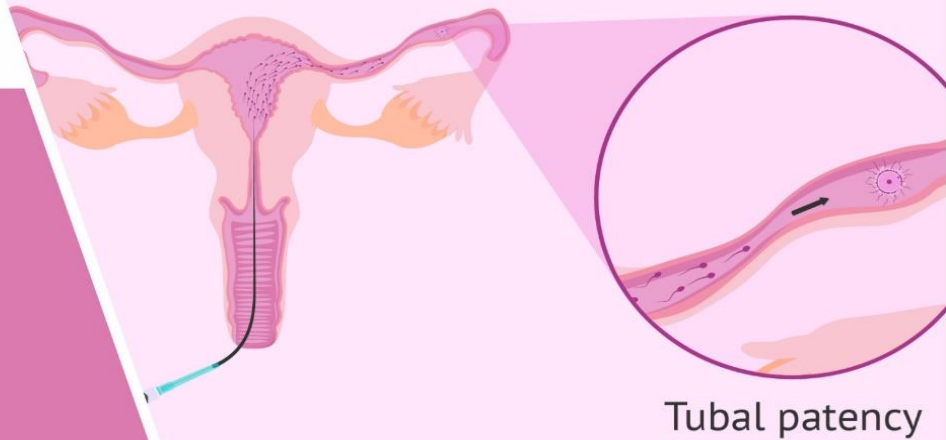


Synapse

3rd Edition



Tubal patency

TUBAL PATENCY TEST



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- Tubal Patency refers to open tubes or in short, absence of any blockage in the tube.
- Tubal blockage affects 15% to 20% of infertile females.
- The availability of a plethora of tests available for testing tubal patency in itself suggests that none of them is conclusive. (1)

Causes of Tubal Blockage

- Previous pelvic infection
- Tuberculosis
- Previous surgery
- Endometriosis
- IUD's (Intra Uterine Devices)

Tests Available to Assess Tubal Patency

1) HYSTEROSALPINGOGRAPHY (HSG)

- Traditional and standard method.
- Radio-opaque water soluble iodine dye used
- Proximal and distal tubal occlusion (No spill), fimbrial phimosis (delayed spill), peritubular adhesions (loculated spill).
- Positive Predictive Value (PPV)- 38% and Negative Predictive Value (NPV)- 94%.
- **Advantages**
 - Helps in diagnosing uterine abnormalities too.
 - Some therapeutic advantage in terms of increased fertility (1)
- **Disadvantages**
 - Flare effect
 - The effective radiation dose varies
 - Extremely painful
 - Severe allergic reactions



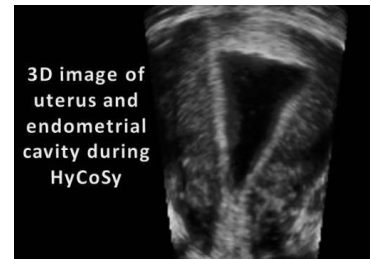
2) SALINE INFUSION SONOGRAPHY (SIS)

- Media used is isotonic saline solution
- Appearance of fluid in the cul-de-sac with saline infusion confirms tubal patency.
- **Advantages** (2)
 - Less invasive and easy to administer
 - No anesthesia required
 - Eliminates need of iodinated contrast and ionizing radiation
- **Disadvantages**
 - Does not differentiate between unilateral or bilateral patency (3)
 - Cannot assess uterine cavity



3) HYSTEROSALPINGO-CONTRAST SONOGRAPHY (HyCoSy) (4)

- Media used is hyperechoic Echovist-200
- Saline Solution Enhanced sonohysterography.
- **Advantages** (5)
 - More than 90% efficacy in evaluating uterine cavity.
 - Minimally invasive and well-tolerated.
- **Disadvantages** (5)
 - Procedural discomfort is more
 - Occasional vasovagal reaction
 - Requires special equipment and expertise



4) LAPAROSCOPY AND CHROMOPERTUBATION

- Time tested definitive test
- **Advantages**
 - Fluoroscopic/hysteroscopic selective tubal cannulation.
 - Confirm or exclude proximal tubal occlusion.
 - Therapeutic advantage in terms of Adhesiolysis and Salpingectomy if hydrosalpinx is detected. (1)
- **Disadvantages**
 - Invasive procedure
 - Risk of anesthesia and injury to internal organs
 - Very expensive diagnostic measure



5) ExEm GEL

- Used for Gel Instillation Sonohysterography (GIS)
- **Advantages**
 - Optimum and stable distension of uterine cavity
 - Minimum inconvenience to patient

6) ExEm FOAM (HyFoSy)

- Used for Hysterosalpingo Foam Sonography
- Gel is pushed rigorously through small openings in syringes or tubes, resulting in air dissolving in the solution and forming foam, which is stable for several minutes,
- **Advantages**
 - Due to its stability, the tubes are visible for at least a minute.
 - No adverse side effects reported.

Comparison of Methods

- **ACCURACY:**
 - Laparoscopy with chromopertubation: Highest accuracy.
 - HSG: Good accuracy, especially for proximal tubal occlusion.
 - SHG and HyCoSy: Less invasive but may be less accurate.
 - HyFoSy: very accurate and informative with minimal side effects
- **INVASIVENESS:**
 - Laparoscopy: Most invasive.
 - HSG: Minimally invasive.
 - SHG and HyCoSy: Least invasive.

Conclusion

Sonohysterosal pingography appears to be inexpensive, minimally invasive, quick, with no risk of ionizing radiation, and well-tolerable first-line diagnostic method for determining the tubal status and uterine cavity and can be performed at the time of conventional ultrasound scan in place of HSG and laparoscopy. (2,6)

REFERENCES

- 1) The role of tubal patency tests and tubal surgery in the era of assisted reproductive techniques- Yalanadu N Suresh, <https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1111/tog.12070>
- 2) Deshpande, Preeti & Deshpande, Suhas. (2015). Sono hysterosalpingography (SHSG): A useful adjuvant in infertility evaluation. Journal of Evolution of Medical and Dental Sciences. 04. 1628-1633. 10.14260/jemds/2015/230.
- 3) Evaluation of Tubal Patency by TVS SSG- Tüfekçi EC, Girit S, Bayirli E, Durmuşoğlu F, Yalti S. Fertil Steril. 1992 Feb;57(2):336-40
- 4) Methods of Tubal Patency Assessment- Rhiana D. Saunders, James M. Shwayder, Steven T. Nakajima a. Fertility and Sterility, June 2011 Volume 95, Issue 7, Pages 2171–2179
- 5) Contrast ultrasonography for tubal patency- Luciano DE, et al. J Minim Invasive Gynecol. 2014 a. Nov-Dec;21(6):994-8.
- 6) A comparative study of Efficacy- Malik B, Patil S, Boricha BG, Kurkal N, Choudhry M.: Ultrasound Q. 2014 Jun;30(2):139-43. doi: 10.1097/RUQ.000000000000057.
- 7) Safety aspects and side effects of ExEm gel and ExEm foam for uterine cavity evaluation -Bijde vaate et al 2010 RBMO.com



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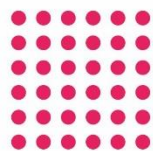
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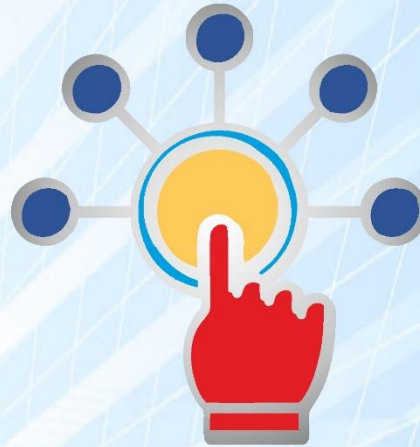
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