**Tubal Patency Tests**

Apart from physiological function (ovulation),anatomical function such as *TUBAL PATENCY* affects infertility..  
  
Mainly following tests are used for testing the tubal patency..  
 1.Insufflation test ( Rubin’s test )  
 2.HysteroSalpingoGraphy ( HSG )  
 3.Laproscopic chromopertubation  
 4.SonosalpingoGraphy

Other modalities

1.Laparoscopy  
 2.Hysteroscopy  
 3.Transveginal falloscopy  
 4.Ampullary & fimbrial Salpingoscopy  
 5.Descending Test

**1.Insufflation test ( Rubin’s test) NOW OBSOLETE**

* Principle :

Cervical canal is continuous with peritoneal cavity through tubes so, when air or Co2 pushed transcervically it reaches peritoneal cavity & gives evidence of normal patency..

* Time :

Postmenstrual phase at least 2 days after stoppage of bleeding

* Limitation :  
   PID & Post ovulatory period
* Observation :  
   Fall in pressure when rise above 120 mmHg

Hissing sound on auscultation at Iliac fossa

Shoulder pain ( due to diaphragmatic irritation)

* Drawback :

In 1/3 it’s false negative due to cornual spasm  
 Can’t identify the SITE & SIDE of blockage

**2.HysteroSalpingoGraphy ( HSG )**

* Principle :

Same as Insufflation test but instead of air & Co2 , DYE instilled trans cervically

* Time & Limitation :

Same as Insufflation test

There may be a risk of radiation..!!

* Dye :

Water soluble (preferable) eg 60% urograffin

Oil Soluble

* Complications : Infection , pain , vasovagal sympt. (atropine 30 min before procedure)
* *Oil soluble*
* Lipiodol & Ethiodol
* It gives more clear & Sharper image
* Slow – so,delayed
* More pain
* May cause oil granuloma & embolism
* *Water soluble*
* 50% Iodine with 6% polyvinyl Alcohol in water
* Rapid absorption
* Less tissue reaction & less adhesion
* Harmless if intravasated in venous system

Method :  
  
 Visualization by screening with image intensifier in X-ray room..!!  
 Foley’s catheter or Leech-wilkinson cannula for insufflation  
 With *aseptic precaution* DYE injected by cannula *in uterine cavity* under vision with *Fluoroscopic screen..* 15 ml is adequate…!!!!  
  
  
DYE flow observed.. It will come out from f.tube to peri.cavity & spill detected..According to it - interpreted……..!!!

**Observation**

* Dye spills out of abdominal ostia & smears the POD -----Tube patent
* Flow stops in between -----Tubal Block & site will seen
* Large confined mass without peritoneal spill -----May be hydrosalpinx

**Other things can be identified..!!!!**

such as..Uterine abnormality - septate, bicornuate etc…

Bilateral cornual block with extravasation suggest TUBERCULOUS salpingitis

***HSG report – normal***

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***HSG report – uni/bi cornuate uterus***

***HSG report – hydrosalpinx***

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***3.Laproscopic chromopertubation***

* Invasive procedure…
* Lap. visualization of pelvis, organs & injection of Methylene Blue dye through Cx & it’s spill is visualized..
* Indication : - Abnormal HSG finding

- Failure to conceive after 6 month of Rx

- Unexplained infertility & age above 35 yr

- Prior to tubal microsurgery

- Also used as Therapeutic in adhesion & fimbrial block,ovarian drilling

* Time :

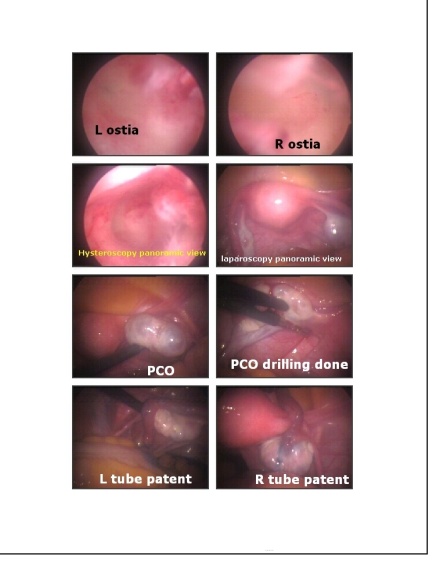
In seceretory phase…

recent corpus leuteum may visualize

Endometrial biopsy can taken..

* Method :

double puncture method used & pelvic organ visualized specially fimbrial end & it’s relation..



***4.SonosalpingoGraphy***

* Popularized by G.Alllahabadiya as ‘ SION ‘ Test
* Principle : Normal saline pushed in u.cavity with pediatric foley’s catheter & bulb inflated above int.os which prevents leakage..
* Nearly 200 ml saline needed…
* Inj. of small amount air help in visualization of air bubble movement
* Fluid in Pouch of Douglas detected
* Advantage : Non-invasive

No radiation exposure

Tubal pathology can be detected

Uterine malformation, synechia or polyp can be detected

***5.Transvaginal falloposcopy***

* Visualize lumen of tubes…
* Therapeutic for *Medial end blockage* due to adhesion or mucous plug..

***6.Ampullary & fimbrial Salpingoscopy***

* To Study mucosa of F. tube in deciding between tubal microsurgery & IVF..
* Colour Doppler Ultrasound – Under study

***7.Descending Test***

* Starch injected in pouch of Douglas, starch present in cervical mucosa 24 hr later indicate patency…
* Advnt. Of Endoscopy..

Minimal invasive

Early recovery & Early discharge

less post op. Pain

Better field of vision

less chance of adhesion

* Dis advnt…

Equipment , Skill, GA, Complications