

Role of Saline Infusion Sonohysterography in Diagnosing Endometrial Polyps

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Study carried out in Radiology Department of Jinnah Hospital Lahore on four patients with age ranges from 35-46 years revealed that the Saline Infusion Sonohysterography plays an important role in diagnosing endometrial abnormalities especially Endometrial Polyps in women's with complaint of intermenstrual bleeding. Saline Infusion Sonohysterography requires minimal patient's preparation, has few complications & is well tolerated by patients. Given its advantages over other techniques for uterine evaluation, Saline Infusion Sonohysterography will play an even larger role in pelvic imaging in future.

Key words: Sonohysterography, Endometrial cavity, Endometrial Polyp, Saline

Saline Infusion Sonohysterography is the technique in which the catheter is introduced into the endometrial cavity & saline is instilled to separate the walls of the endometrium. This technique is known by many names including sonohysterography, or Transvaginal hysterosonography, etc.

Technique and discussion

Saline Infusion Sonohysterography is a technique that involves placing a catheter into the uterine cavity through the cervical OS to inject the sterile saline into the endometrial canal. The saline distends the endometrial cavity, pushing the opposed wall of endometrium apart. The anechoic saline seen within the endometrial cavity gives details of the uterine lining. Because there is considerable variation in the thickness of the endometrium in menstruating women. This technique is best performed as soon as possible after the cessation of the menses, during the proliferative phase of menstrual cycle, no later than day 10. This is before ovulation because SIS is contraindicated in pregnancy. This technique is also contraindicated in pelvic inflammatory disease and in the patients with intrauterine contraceptive device. During the days 4 to 6 of the menstrual cycle, the endometrium is thinnest. When the endometrium is thin, the focal lesions such as endometrial polyps are best visualized. In general the secretory phase is avoided because of false positive findings from folds and wrinkles in the lining. In postmenopausal women with abnormal bleeding the examination can be performed at any time. Bleeding is not a contraindication to SIS, however the presence of blood clots within the endometrial canal make interpretation more difficult. Initially the patient undergoes routine Transvaginal ultrasound to see the details of endometrium and the adenexal region. Complications like pelvic pain, small amount of bleeding, rarely infection can occur. For pelvic pain some pain relieving agent like Brufen (600mg), & for infection, prophylactic antibiotic can be given.

The instrument required for this Saline Infusion Sonohysterography is sterilized vaginal speculum,

hysterosonography catheter, 20 ml syringe, small amount of saline, 5ml syringe for balloon inflation, sterilized gloves.

The patient is placed in lithotomy position. The sterilized vaginal speculum is placed into the vagina and cervix is visualized. Then the catheter is introduced (using Xylocaine for local anesthetic) into the endometrial canal. Once into the endometrial canal, the balloon is inflated with 2.5ml of fluid, so that the catheter is fixed. The vaginal speculum is removed. The double condom is placed on the Transvaginal probe, & carefully introduced in the vagina. Now under Transvaginal ultrasound guidance 5-25ml saline is injected. This will distend the endometrial cavity. So the focal lesions can be properly evaluated in both longitudinal and transverse sections. After endometrial evaluation the balloon is deflated and the catheter is slowly removed. Mostly this procedure is easily tolerated by the patients.

The Endometrial Polyps are the common cause of abnormal vaginal bleeding in premenopausal & postmenopausal women's. Most of the Polyps are benign. The incidence of malignancy in Endometrial Polyps ranges between 1-3%.

On routine abdominal ultrasound the Endometrial Polyp is some time difficult to diagnose from thick endometrium (Endometrial Hyperplasia). But sometimes a hypoechoic rim can be visualized around the Endometrial Polyp on routine abdominal ultrasound. On Transvaginal ultrasound the Endometrial Polyps are echogenic & homogenous in texture. Rarely cystic areas can be seen within the Polyps. Even on Transvaginal ultrasound, sometimes it is very difficult to distinguish between polyps & endometrial hyperplasia. The SIS can easily distinguish between the Polyps & the endometrial thickening. The polyps are the focal lesions which project into the lumen of endometrial cavity. The anechoic saline outlines the echogenic lesion within the endometrial cavity. Polyps are usually very uniform in texture & some time a pedicle can be very clearly visualized.

Patients and material

In Radiology Department of Jinnah Hospital / Allama Iqbal Medical College Lahore, four cases were examined with suspicion of endometrial polyp on routine abdominal & Transvaginal ultrasound, later followed by the Saline Infusion Sonohysterography. Age of the four patients ranged between 35-46 years, with an average age incidence of 40 years. Clinical presentation varied from non-specific intermenstrual P/V spotting to menorrhagia. Patients were referred to Radiology Department from Gynae out-patient Deptt. for routine pelvic ultrasound examination. Transabdominal & Transvaginal Ultrasound examination in two of these cases showed suspicion of endometrial hyperplasia, which was later confirmed as endometrial polyp on SIS. In the third case an echogenic focus was noted in the uterine cavity, which on SIS appeared as endometrial polyp. Fourth case on Transvaginal ultrasound showed an echogenic focus within the uterine cavity with a surrounding hypo-echoic rim, on SIS endometrial polyp with its pedicle was visualized. So all four cases were diagnosed on SIS as Endometrial Polyps.

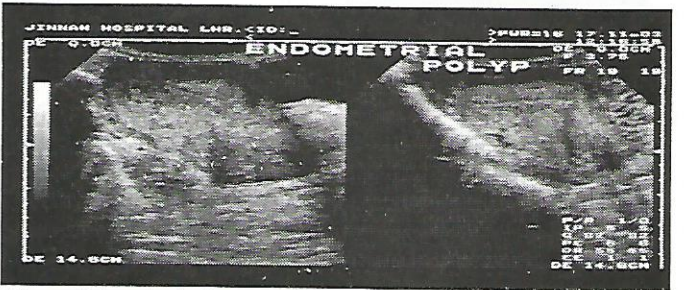
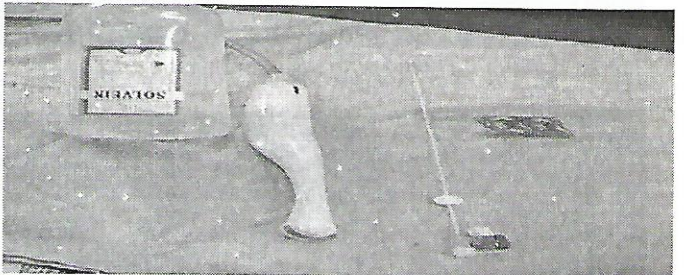
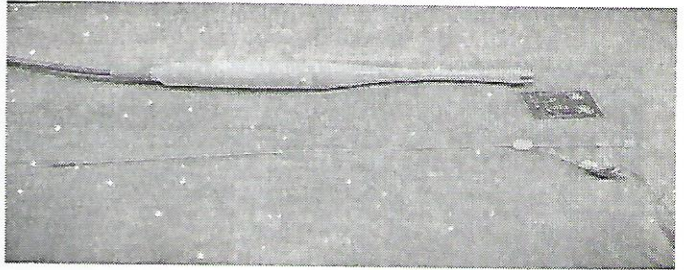
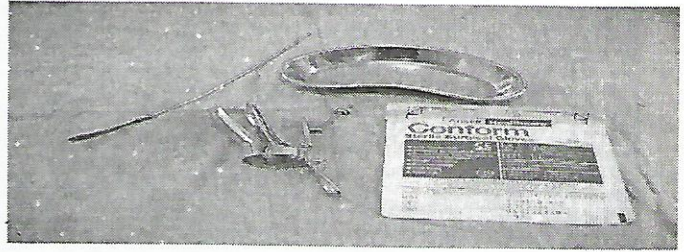
Results

All of the patients were confirmed as Endometrial Polyps on SIS.

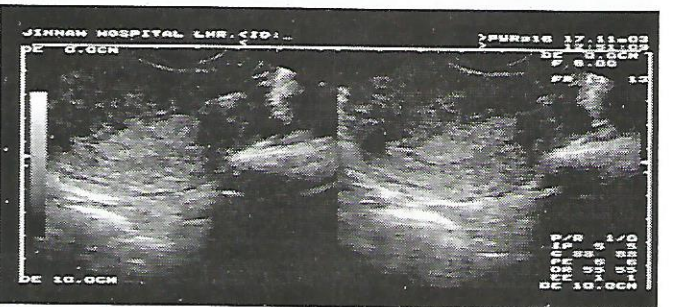
No. of patients	4
Age of the patients	1) 35years 2) 41years 3) 46years 4) 39years
Average age	40years
Presentation	Non-specific intermenstrual P/V spotting to menorrhagia

Conclusion

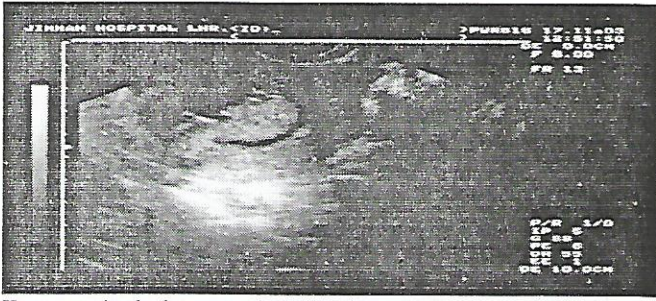
SIS is a simple technique that yields additional information over TVS in evaluation of Endometrial Polyps. It is well tolerated by the patients & has very few complications. Radiologists familiar with Transvaginal Ultrasound imaging will find that SIS is not technically difficult. In patients with abnormal vaginal bleeding SIS is able to better delineate the abnormality. Because the walls of Endometrium are separated by SIS, they can be evaluated individually. Focal abnormalities are better delineated by this technique. So whenever there is difficulty to differentiate between the endometrial polyp & endometrial hyperplasia on routine abdominal or Transvaginal ultrasound, the SIS can be performed for confirmed diagnosis.



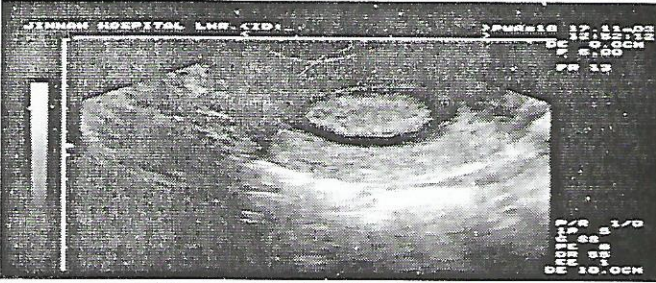
Transabdominal ultrasound



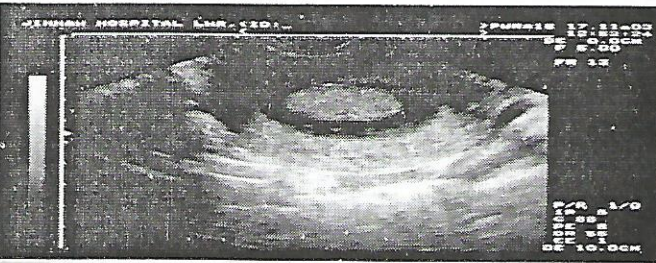
Transvaginal ultrasound



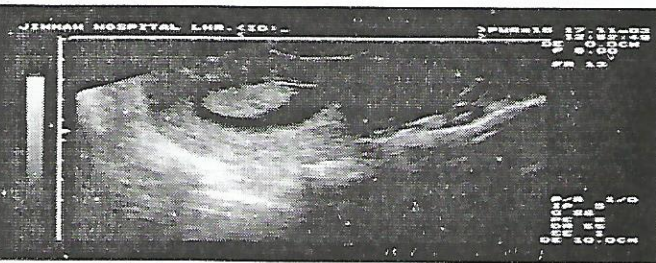
Transvaginal ultrasound with saline infusion



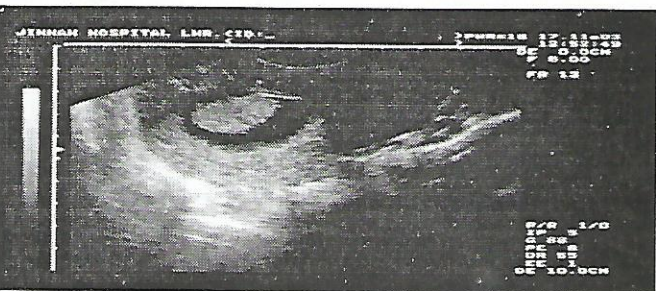
Transvaginal ultrasound with saline infusion



Transvaginal ultrasound with saline infusion



Transvaginal ultrasound after saline infusion



Pedicle of polyp visualised after saline infusion

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