ADVANCED RADIOLOGY CENTRE

ARC

STATE-OF-THE-ART CARE

Dear Colleagues,

ARC is always in the forefront of cutting edge technology especially in the field of Women's imaging.

Infertility is on the rise and its management poses a significant challenge to the Gynecologists. Tubal factors account for 30-35% of causes of infertility and until now, X-ray based Hysterosalpingograhy with iodine contrast medium and Laparoscopy is commonly used to determine tubal patency.

In keeping with our tradition of giving advanced sonography solutions to medical problems, we have recently started Sonosalpingography using contrast medium specifically made for Sonography called Sonovue in the initial work up for patients with infertility. We have been doing SSG using saline since the past 2 years with excellent results. Ultrasound contrast mediums have been used intravenously, all over the world for enhancing lesions in the liver, abdomen, breast and thyroid for several years with proven safety and are now available in India.

IN FACT WE ARE THE FIRST IN MUMBAI TO USE THIS ULTRASOUND BASED CONTRAST MEDIUM FOR SSG. WE RECENTLY PRESENTED OUR INITIAL FINDINGS AT A NATIONAL ULTRASOUND CONFERENCE (ULTRAFEST 2015) IN APRIL AND WON THE FIRST PRIZE IN THE FREE PAPER CATEGORY OUT OF 90 SUBMISSIONS.

The Proud ARC Team with 1st prizes in best paper and best poster category.

Sonovue is a 2nd generation contrast agent (sodium sulphur hexachloride) with microbubbles which remain stable for about 6 hours. It needs to be reconstituded with 5 cc of normal saline. 2-3 cc of this resonstituted contrast agent diluted with 5-10 cc of saline can be used for 1 patient. So a vial can be used for 2-3 patients at a time bringing down the cost substantially. Each vial costs about Rs 5000.

Advantages of using Sonovue over HSG and SSG using saline are as follows:

1) The contrast agent can be seen flowing into the entire course of the fallopian tube as well as its spill in the fimbrial end and periovarian diffusion on real time. Very little quantity is used, so there is very little pain as compared to SSG with saline and HSG as more quantity (approx. 10-15 cc) is used at a time.

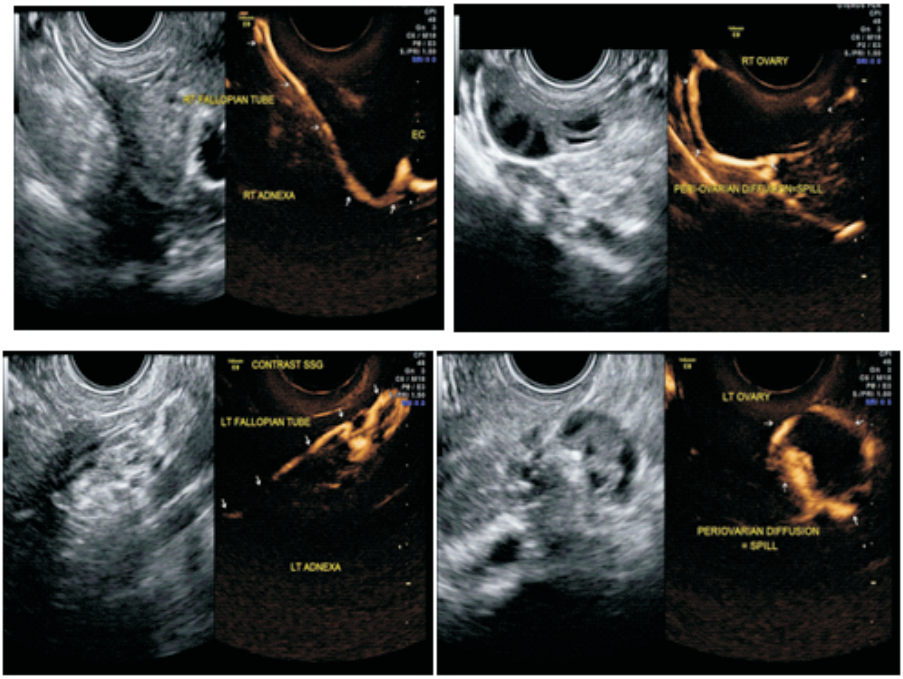

Fig 1. Normal Fallopian tubes with free spill and peri-ovarian diffusion

2) The fallopian tubes are delineated with X-ray based Hysterosalpingography using the dye iodinated contrast agent) as well, but ionizing radiation is used and there can be very severe reactions to this contrast agent.

3) The endometrial canal with saline (sonohysterography),ovaries and adnexae can be thoroughly evaluated on 2-D as well as 3-D examination. In fact, we diagnosed 4-5 cases of uterine synechiae, which were not suspected and were the real cause of infertility with several failed attempts of IUI.

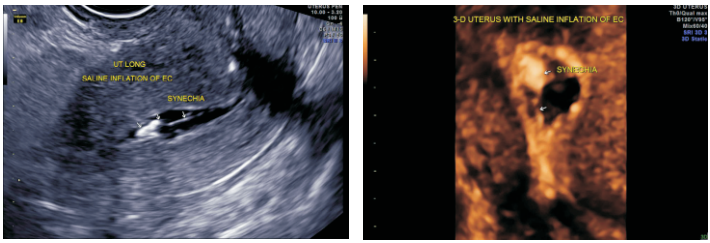

Fig 2. Uterine synechiae in a patient with normal fallopian tubes

4) It is a simple, OPD procedure, fairly accurate for determination of fallopian tube patency with a high positive predictive value.

5) Invasive diagnostic laparoscopy can be avoided if the tubes are patent and can be used in only selected patients.

6) Mild to moderate pain, but well tolerated. No vasovagal reaction or any infection was noted in any of our patient.

7) Therapeutic effect- 6 patients with delayed spill conceived.

8) Helps in management decisions, whether IUI or IVF.

Some of the abnormalities picked up are as follows:

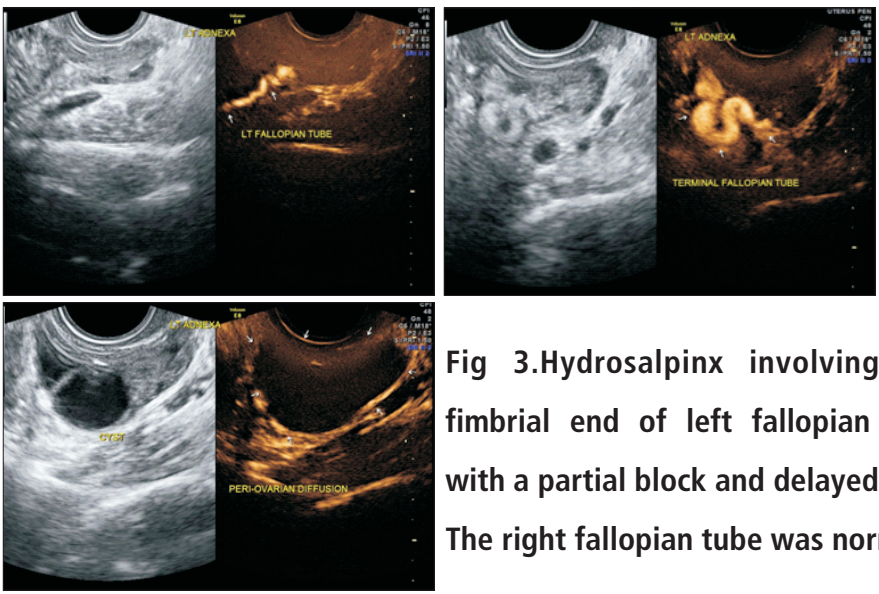

Fig 3.Hydrosalpinx involving the fimbrial end of left fallopian tube with a partial block and delayed spill. The right fallopian tube was normal.

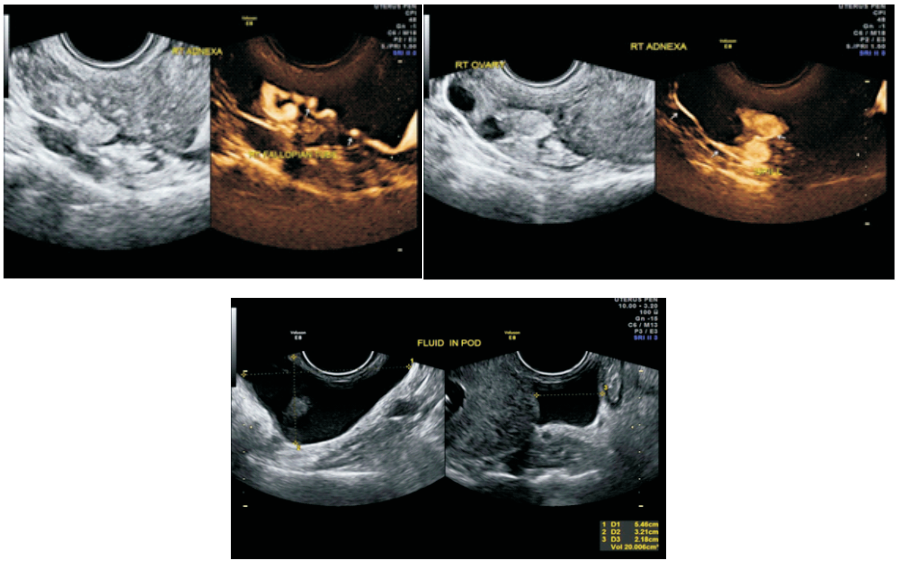

Fig 4. Right Fallopian tube is showing a beaded appearance with a delayed spill. Blocked left Fallopian tube and moderate fluid also seen in POD . Findings S/O PID of Koch's aetiology

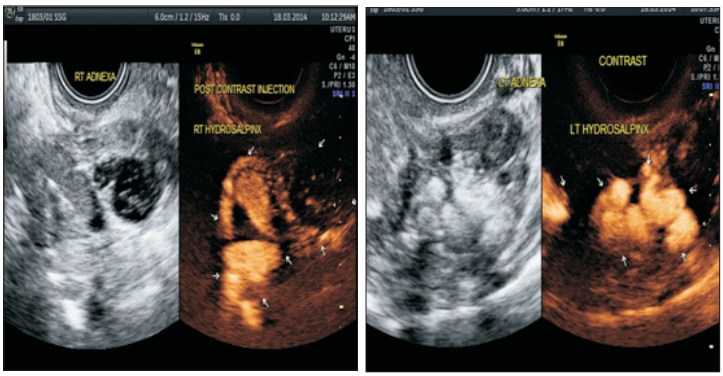

Fig 5.Bilateral Hydrosalpinx with contrast filling the distended Fallopian tubes in the delayed scan

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