

A Clinical Audit on Screening Women with Subfertility Using Transvaginal Scan and Hysterosalpingo Contrast Sonography

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Abstract : Background: Testing Patency of Fallopian Tubes is among one of the several protocols for investigating Subfertile Couples. Both, Hysterosalpingogram (HSG) and Laparoscopy and dye test have been used as Tubal patency test for several years, with well-known limitation. Hysterosalpingo Contrast Sonography (HyCoSy) can be used as an alternative tool to HSG, to screen patency of Fallopian tubes, with an advantage of being non-ionising, and also, use of transvaginal scan to diagnose pelvic pathology. Aim: To determine the indication and analyse the performance of transvaginal scan and HyCoSy in Broomfield Hospital. Methods: We retrospectively analysed fertility workup of 282 women, who attended HyCoSy clinic at our institution from January 2015 to June 2016. An Audit proforma was designed, to aid data collection. Data was collected from patient notes and electronic records, which included patient demographics; age, parity, type of subfertility (primary or secondary), duration of subfertility, past medical history and base line investigation (hormone profile and semen analysis). Findings of the transvaginal scan, HyCoSy and Laparoscopy were also noted. Results: The most common indication for referral were as a part of primary fertility workup on couples who had failure to conceive despite intercourse for a year, other indication for referral were recurrent miscarriage, history of ectopic pregnancy, post reversal of sterilization (vasectomy and tuboplasty), Post Gynaecology surgery (Loop excision, cone biopsy) and amenorrhea. Basic Fertility workup showed 34% men had abnormal semen analysis. HyCoSy was successfully completed in 270 (95%) women using ExEm foam and Transvaginal Scan. Of the 270 patients, 535 tubes were examined in total. 495/535 (93%) tubes were reported as patent, 40/535 (7.5%) tubes were reported as blocked. A total of 17 (6.3%) patients required laparoscopy and dye test after HyCoSy. In these 17 patients, 32 tubes were examined under laparoscopy, and 21 tubes had findings similar to HyCoSy, with a concordance rate of 65%. In addition to this, 41 patients had some form of pelvic pathology (endometrial polyp, fibroid, cervical polyp, fibroid, bicornuate uterus) detected during transvaginal scan, who referred to corrective surgeries after attending HyCoSy Clinic. Conclusion: Our audit shows that HyCoSy and Transvaginal scan can be a reliable screening test for low risk women. Furthermore, it has competitive diagnostic accuracy to HSG in identifying tubal patency, with an additional advantage of screening for pelvic pathology. With addition of 3D Scan, pulse Doppler and other non-invasive imaging modality, HyCoSy may potentially replace Laparoscopy and chromopertubation in near future.

Keywords : hysterosalpingo contrast sonography (HyCoSy), transvaginal scan, tubal infertility, tubal patency test

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