SUMMARY

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Assessment of tubal patency and uterine cavity configuration are fundamental parts of the investigation of the infertile couple.

Hysterosalpingogram **(HSG)** has become the primary means of indirectly assessing these factors, it has been widely accepted for over 70 years as an outpatient procedure, however, it is associated with an increased risk of radiation, infection, pain and is not feasible in patients with idiosyncrasies to x-ray contrast agents.

Hysterosalpingo-contrast-sonography **(HY-CO-SY)** is an alternative technique, using transabdominal scanning and an ultrasound contrast medium to delineate the uterine cavity and demonstrate flow along the fallopian tubes.

Using (Echovist-200) as a contrast medium creates a new acoustic interface which improve the quality of the ultrasound imaging, the tubal patency could be assessed by direct observation of intraluminal flow of (Echovist-200).

Hysterosalpingo-contrast-sonography was seemed to be suitable as an outpatient examination to evaluate uterus and tubal patency, that was easy to perform within about 10-15 minutes without exposing the patient to ionizing radiation, it may allow the patient to be assigned to the appropriate treatment at an earlier stage thus can save both time and cost.

The aim of this study was to demonstrate the diagnostic efficacy of **(HY-CO-SY)** compared with that of **(HSG)** in the evaluation of uterine cavity and tubal patency in infertile patients.

This study comprised 20 infertile women, 17 with primary infertility and 3 with secondary infertility, in the department of Obstetrics and Gynecology, Benha Faculty of Medicine. After complete history taking and full general and local pelvic examination were done, both the uterus and the patency of fallopian tubes were checked by performing **(HY-CO-SY)** using (Echovist-200) as ultrasound contrast medium, the above test was performed between days 9 and 13 of menstrual cycle.

Echovist-200 was injected through the cervix and was screened by transabdominal scanning through the uterine cavity, the tubes and the peritoneal cavity.

All patients have done **(HSG)** 2 months before **(HY-CO-SY)**. A comparison was done between **(HY-CO-SY)** results and **(HSG)** results after analyzing the collected data.

At this study association between **(HY-CO-SY)** and **(HSG)** in relation to tubal patency had sensitivily ranged from 50% to 66.7%, specificity ranged from 94.4% to 100%, accuracy ranged from 90% to 95%, positive predictive value ranged between 50-100% and negative predictive value 94.4%.

Association between **(HY-CO-SY)**, and **(HSG)** in relation to uterus has sensitivity 100%, specificity 94.4%, accuracy 95%, positive predictive value 66.7% and negative predictive value 100%.

It was concluded that both **(HY-CO-SY)** and **(HSG)** are equally well tolerated outpatient procedures for assessing tubal patency and uterine abnormalities. However, **(HY-CO-SY)** avoids the risks of ovarian irradiation and the adverse reactions to iodinated contrast media.