

Value of 3-dimensional sonohysterography in infertility work-up

El-Sherbiny W, Nasr AS.

Department of Obstetrics and Gynecology, Faculty of Medicine, Cairo University, Cairo, Egypt. wssherbiny@yahoo.com

Abstract

STUDY OBJECTIVE:

To compare the diagnostic value of 2-dimensional (2D) and 3-dimensional (3D) sonohysterography (SHG) and outpatient hysteroscopy (OH) in detecting intrauterine lesions in infertile women.

DESIGN:

Comparative, observational, cross-sectional study (Canadian Task Force Classification II-2).

SETTING:

University hospital.

PATIENTS:

One hundred eighty women with a normal uterine cavity at transvaginal ultrasound and hysterosalpingography (HSG) underwent infertility workup at our outpatient clinic.

INTERVENTIONS:

All patients underwent 2D-SHG, 3D-SHG, and OH.

MEASUREMENTS AND MAIN RESULTS:

Sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and accuracy of 2D-SHG and 3D-SHG were compared with OH in detecting intrauterine lesions. For 2D-SHG, sensitivity was 0.70 (95% confidence interval [CI], 0.49-0.85), specificity was 1.0 (95% CI, 0.96-1.0), PPV was 1.0 (95% CI, 0.79-1.0), NPV was 0.95 (95% CI, 0.9-0.97), and accuracy was 95.5%. For 3D-SHG, sensitivity was 0.92 (95% CI, 0.74-0.98), specificity was 1.0 (95% CI, 0.97-1.0), PPV was 1.0 (95% CI, 0.83-1.0), NPV was 0.98 (95% CI, 0.95-0.99), and accuracy was 98.8%. For OH, sensitivity was 1.0 (95% CI, 0.85-1.0), specificity was 1.0 (95% CI, 0.97-1.0), PPV was 1.0 (95% CI, 0.84-1.0), NPV was 1.0 (95% CI, 0.97-1.0), and accuracy was 100%. Thus, 3D-SHG is comparable to OH in diagnosing intrauterine lesions ($p = .23$), and both are superior to 2D-SHG ($p < 0.001$).

CONCLUSION:

The diagnostic value of 3D-SHG is comparable to OH in detecting intrauterine lesions, and both are superior to 2D-SHG. 3D-SHG should be included in the infertility workup even in women with a normal uterine cavity at transvaginal ultrasound or hysterosalpingography.

Published In: J Minim Invasive Gynecol. 2011 Jan-Feb;18(1):54-8.