دراسة مقارنة بين استخدام الموجات فوق الصوتية ثلاثية الابعاد واستخدام الموجات فوق الصوتية ثلاثية الابعاد مصحوبة بحقن محلول ملح داخل الرحم فى تقييم التجويف الرحمى فى مرضى العقم

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٢٠٠٩

Three Dimensional Sonography Versus Three Dimensional Saline Sonohysterography in Evaluation of the Uterine Cavity in Infertile patients

Thesis

Submitted in Partial Fulfillment of M.D., Degree in Obstetrics & Gynecology

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Introduction and aim of the work

Summary

List of abbreviations

- 2D US Two-dimensional ultrasound
- 3D US Three-dimensional ultrasonography
- 3D SHG Three-dimensional sonohysterography
- 3D SIS Three-dimensional saline infusion sonohysterography
- 3D TVS Three-dimensional transvaginal sonography
- 3D-HyCoSy Three-dimensional hysterosalpingo-contrast sonography
- CI Confidence interval
- D&C Dilatation and curettage
- GnRH Gonadototrophin-releasing hormone
- HSG Hysterosalpingography
- ICSI Intracytoplasmic sperm injection
- IUA Intrauterine adhesions
- IVF In vitro fertilization
- IVF-ET In vitro fertilization and embryo transfer
- MRI Magnetic Resonance Imaging
- NPV Negative predictive value
- PPV Positive predictive value
- RI Resistance Index
- SHG Sonohysterography
- SIS Saline infusion sonohysterography
- SonoHSG Sonohysterosalpingography
- TVU Transvaginal ultrasound
- US Ultrasound
- VOCAL Virtual Organ Computer-aided AnaLysis

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Abstract

The purpose of this study was to compare the efficacy of three-dimensional Sonography with three-dimensional saline infusion sonohysterography (3D SIS) in evaluation of uterine cavity in infertile patients. ***Patient and methods***: One hundred patients were recruited for the study with assumption to be harboring a uterine lesion. This assumption was made from the history, clinical examination or previous investigations suggesting uterine cavity abnormality including congenital uterine anomalies (Müllerian anomalies), intrauterine adhesions or uterine cavity pathology (polyps, myomas …). All patients underwent 2 D sonography, 2D sonohysterography, 3D sonography and 3D sonohysterography. ***Results***: The overall result of accuracy of different modalities was 80.49% for 2D sonography, 94.87% for 3D sonography and 100% for 2D sonohysterography and 3D sonohysterography. The accuracy of different modalities in detection of endometrial polyp was 85.19% for 2D sonography, 88% for 3 D sonography and 95.65% for 2D sonohysterography and 3D sonohysterography. The accuracy of different modalities in detection of uterine anomalies was 96.30% for 2D sonography, and 100% for 3D sonography, 2D sonohysterography and 3D sonohysterography. The accuracy of different modalities in detection of intrauterine adhesions was 85.19% for 2 D sonography, 95.65% for 2D sonohysterography and 3D sonohysterography, but 96% for 3D sonohysterography. ***Conclusion:*** From our study we could conclude that 2D sonohysterography has an accuracy rate similar to that for 3D sonohysterography and 3D sonohysterography has slightly higher accuracy than 3D US so saline infusion may not needed if 3D US machine is available.

***Key words*:** 2 D sonography, 2D sonohysterography, 3 D sonography and 3D sonohysterography, uterine lesion.