A virtual ultrasonographic approach to uterine study: virtual hysteroscopy. Findings on virtual study and office hysteroscopy.

Context: Fly Thru is a technology, which allows performing virtual study of uterus, virtual hysteroscopy.

Objective: To describe a completely new approach to uterine cavity study, virtual hysteroscopy and to compare findings with an office hysteroscopy.

Methods: First a virtual hysteroscopy and successively a traditional hysteroscopy was performed. Patients: Forty patients who performed the study as a part of infertility investigation.

Interventions: After introduction of a Ringer Lactate solution into the uterine cavity, a quick 3D volume acquisition was carried out, and the ultrasound information acquired was manipulated. The uterine morphology was studied with 2D and 3D images and virtual hysteroscopy. Successively all patients underwent classic hysteroscopy. Women did not receive any pain medication or antibiotic protection before undergoing the procedure.

Main Outcome Measures: Findings on virtual hysteroscopy were compared to those of traditional hysteroscopy. Pain and discomfort of both diagnostic approaches were compared using the VAS score scale.

Results: Suspected findings on virtual hysteroscopy such as partial or complete septate uterus, bicornuate uterus, submucous myomas, endometrial polyps were confirmed on hysteroscopy. It was possible to analyse images with virtual navigation in different directions- towards the fundus, the tubal ostia, and the uterine isthmus.

Conclusions: The image obtained with virtual approach was similar to that of office hysteroscopy, but at the same time, the ultrasonographic aspect of the uterine wall with a 2D ultrasound image was observed. Both exams were well-tolerated and non-invasive procedures.