Virtual salpingoscopy and hysteroscopy with Fly Thru: a new approach for one-step ultrasonographic study of tubal and uterine infertility factor.

Stepniewska Anna Katarzyna (IT) [1], Signori Chiara (IT) [2], Scioscia Marco (IT) [3], Zantedeschi Bruna (IT) [4], Trivella Giamberto (IT) [5], Marcello Ceccaroni (IT) [6]

Context: The assessment of the tubal factor is fundamental in infertility investigation. Different diagnostic tests may be used for evaluation of tubal patency, but the inner aspect of fallopian tube may be studied only with salpingoscopy or falloposcopy, related to an invasive approach.

Objective: To verify the feasibility of virtual salpingoscopy and to report the first experience with a new novel approach to ultrasonographic study of fallopian tubes and the uterus with Fly Thru technique.

Methods: Virtual hysteroscopy and salpingoscopy during hysterosalpingosonography was performed. Patients were asked to describe pain during and after the exam with the use of VAS score.

Patients: 80 infertile patients who underwent hysterosalpingosonography as a part of infertility study in Infertility Centre.

Interventions: A Ringer Lactate solution was injected into the uterine cavity and tubes, and a quick 3D volume acquisition was carried out. In the second step, a classic hysterosalpingosonography with air bubbles was performed. Only after exam conclusion, the ultrasound information acquired was manipulated, and virtual hysteroscopy and salpingoscopy were performed.

Main Outcome Measures: Different normal and abnormal findings on tubal and uterine images were observed in virtual salpingoscopy and hysteroscopy.

Results: The exam was well-tolerated and no severe complications were reported.

Conclusions: Virtual salpingoscopy is feasible, and it gives new aspects in infertility study, remaining still a non-invasive exam. Hysterosalpingosonography with Fly Thru is an innovative approach, well-tolerated and complete for first-line morphological study in infertile patients.