

LiNA OperåScope™

Patient and provider satisfaction with saline ultrasound versus office hysteroscopy for uterine cavity evaluation prior to in vitro fertilization: a randomized control trial

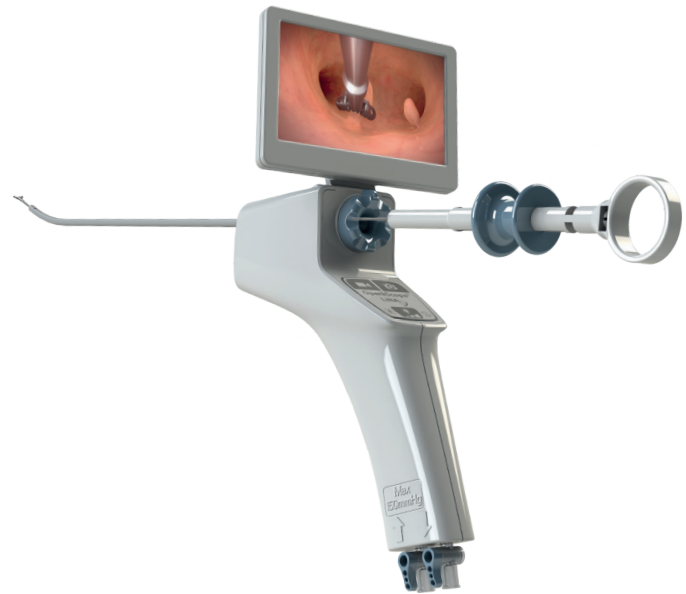
Sarah Moustafa, Emma Rosen, Linnea Goodman

Objective: To compare patient and provider satisfaction with saline ultrasound (SIS) versus office hysteroscopy for cavity evaluation prior to in vitro fertilization (IVF) and to assess the capability of hysteroscopy to manage pathology at time of diagnosis to reduce delays and supernumerary procedures.

Methods: This was a randomized, controlled trial in a university fertility clinic. One hundred enrolled subjects undergoing routine uterine cavity evaluation prior to planned embryo transfer were randomized to SIS or office hysteroscopy (utilizing the LiNA OperåScope™) without anesthesia. Subjects and providers completed surveys about their experience. Subjects with findings on SIS had a hysteroscopy performed or scheduled for further evaluation. Those with hysteroscopy findings had management attempted within the same procedure.

Results: Overall patient satisfaction was high and did not differ between groups, while providers indicated that hysteroscopy provided a better cavity evaluation. There was no difference in time to complete procedures between groups. Pain score on a ten scale was slightly higher in the hysteroscopy group compared to the SIS group (3.38 ± 1.85 vs. 2.44 ± 1.64 , $p < 0.01$), but this did not impact satisfaction scores. Although pathology was found in a similar rate (22% vs. 36% for SIS and HSC groups, respectively), those in the SIS group all required secondary procedures, while only 1/17 did in the HSC group ($p < 0.01$). On average, patients who had a combined screening and intervention procedure incurred less costs than those with screening alone or sequential screening and interventional procedures, suggesting a financial advantage to this approach.

Conclusion: With reduced need of costly equipment, significantly fewer secondary procedures, improved reimbursement, comparable patient experience, and increased functional capacity, office hysteroscopy can be considered as a primary screening tool in the asymptomatic infertile population planning IVF.



	SIS (n = 50)	OperåScope™ (n = 50)	p-value
Time to complete (min)	3.98 (± 2.03)	4.61 (± 2.42)	0.16
Patient satisfaction (scale)			
Pain score (10)	2.44 (± 1.64)	3.38 (± 1.85)	<0.01
Satisfaction time to complete (5)	4.88 (± 0.52)	4.92 (± 0.34)	1
Overall satisfaction (5)	4.84 (± 0.47)	4.92 (± 0.34)	0.57
Provider satisfaction (scale)			
Uterine cavity evaluation (5)	4.70 (± 0.54)	4.84 (± 0.62)	0.04
Perception of pain (5)	4.74 (± 0.66)	4.70 (± 0.61)	0.13
Overall satisfaction (5)	4.56 (± 0.81)	4.76 (± 0.69)	0.11
Pathology found			
Polyp	7 (14%)	10 (20%)	0.12
Myoma	1 (2%)	0 (0%)	
Adhesions	2 (4%)	2 (4%)	
RPOC	1 (2%)	5 (10%)	
Uterine anomaly	0 (0%)	2 (4%)	
Inconclusive	1 (2%)	0 (0%)	
Second procedure needed	11 (22%)	1 (2%)	<0.01

Table 1. Primary and secondary outcomes by intention to treat.

Moustafa, S., Rosen, E. & Goodman, L. Patient and provider satisfaction with saline ultrasound versus office hysteroscopy for uterine cavity evaluation prior to in vitro fertilization: a randomized controlled trial. *J Assist Reprod Genet* (2021). <https://doi.org/10.1007/s10815-021-02065-9>