


References

- Chan YY, Jayaprakasan K, Zamora J, Thornton JG, Raine-Fenning N, Coomarasamy A. The prevalence of congenital uterine anomalies in unselected and high-risk populations: a systematic review. *Hum Reprod Update* 2011;**17**:761–771.
- Exalto N, Emanuel MH. Clinical aspects of HyFoSy as tubal patency test in subfertility workup. *Biomed Res Int* 2019;**2019**:4827376.
- Groszmann YS, Benacerraf BR. Complete evaluation of anatomy and morphology of the infertile patient in a single visit; the modern infertility pelvic ultrasound examination. *Fertil Steril* 2016;**105**:1381–1393.
- Kelly SM, Sladkevicius P, Campbell S, Nargund G. Investigation of the infertile couple: a one-stop ultrasound-based approach. *Hum Reprod* 2001;**16**:2481–2484.
- Melcer Y, Gat I, Dvash S, Copel L, Pekar-Zlotin M, Youngster M, Maymon R. Tubal patency assessment using sequential transvaginal ultrasound and hysterosalpingo-foam sonography after methotrexate treatment for tubal pregnancy. *Reprod Biomed Online* 2022a;**44**:310–315.
- Melcer Y, Nimrodi M, Levinsohn-Tavor O, Gal-Kochav M, Pekar-Zlotin M, Maymon R. Analgesic efficacy of intrauterine lidocaine flushing in hysterosalpingo-foam sonography: a double-blind randomized controlled trial. *J Minim Invasive Gynecol* 2021a;**28**:1484–1489.
- Melcer Y, Shamir-Kaholi N, Vainer-Rotbart S, Pekar-Zlotin M, Youngster M, Gat I, Maymon R. Spontaneous pregnancy rates in infertile women after sequential hydrosonography and hysterosalpingo-foam sonography. *Eur J Obstet Gynecol Reprod Biol* 2022b;**271**:219–222.
- Melcer Y, Zilberman Sharon N, Nimrodi M, Pekar-Zlotin M, Gat I, Maymon R. Hysterosalpingo-foam sonography for the diagnosis of tubal occlusion: a systematic review and meta-analysis. *J Ultrasound Med* 2021b;**40**:2031–2037.
- Seshadri S, El-Toukhy T, Douiri A, Jayaprakasan K, Khalaf Y. Diagnostic accuracy of saline infusion sonography in the evaluation of uterine cavity abnormalities prior to assisted reproductive techniques: a systematic review and meta-analyses. *Hum Reprod Update* 2015;**21**:262–274.
- van Welie N, van Rijswijk J, Dreyer K, van Hooff MHA, Bruin JP, Verhoeve HR, Mol F, van Baal WM, Traas MAF, van Peperstraten AM et al. Can hysterosalpingo-foam sonography replace hysterosalpingography as first-choice tubal patency test? A randomized non-inferiority trial. *Hum Reprod* 2022;**37**:969–979.

Yaakov Melcer * and Ron Maymon

Department of Obstetrics and Gynecology, The Yitzhak Shamir Medical Center (Formerly Assaf Harofeh Medical Center), Affiliated to the Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

*Correspondence address. Department of Obstetrics and Gynecology, The Yitzhak Shamir Medical Center, Zerifin 70300, Israel. Tel: +972-8-9779695; Fax: +972-8-9779089; E-mail: ymeltcer@gmail.com

 <https://orcid.org/0000-0002-7014-5892>

<https://doi.org/10.1093/humrep/deac132>
Advance Access Publication on June 17, 2022

Reply: ‘One-stop shop’ ultrasound evaluation of an infertile patient: doing less is no longer an option

Sir,

We thank Dr Melcer and Dr Maymon for their interest in our article. Dr Melcer and Dr Maymon comment that our study results need to be seen as just one part of the comprehensive ‘one-stop shop’ fertility work-up in infertile couples (Melcer and Maymon, 2022). We agree that hysterosalpingo-foam sonography (HyFoSy) is not the only part of the work-up. Indeed, other features, such as uterine polyps, submucous myomas, uterine anomalies and intrauterine adhesions can also be visualized, although their prognostic and therapeutic impact is largely unclear.

We want to stress that our study does not take into account the direct therapeutic effect of tubal flushing. Recent studies showed a fertility-enhancing effect of tubal flushing during hysterosalpingography with oil-based contrast, resulting in higher pregnancy and live birth rates (Dreyer et al., 2017; Fang et al., 2018; Wang et al., 2019; Wang et al., 2020). Direct therapeutic effects of tubal flushing using HyFoSy versus other types of contrast are still to be assessed.

Funding

The FOAM study was an investigator-initiated study funded by ZonMw, the Netherlands organization for Health Research and Development (project number 837001504). ZonMw funded the whole project. IQ Medical Ventures provided the ExEm-foam[®] kits free of charge. The funders had no role in study design, collection, analysis and interpretation of the data. The corresponding author had full access to all the data in the study and had final responsibility for the decision to submit for publication.

Conflict of interest

K.D. reports travel and speaker fees from Guerbet. B.W.J.M. reports grants from National Health and Medical Research Council (NHMRC). B.W.M. reports consultancy for Guerbet and research funding from Merck and Guerbet. V.M. reports non-financial support from IQ medicals ventures, during the conduct of the study; grants and personal fees from Guerbet, outside the submitted work; and his department receives research grants from Ferring and Merck, outside the submitted work. The other authors do not report conflicts of interest.

References

- Dreyer K, van Rijswijk J, Mijatovic V, Goddijn M, Verhoeve HR, van Rooij IAJ, Hoek A, Bourdrez P, Nap AW, Rijnsaardt-Lukassen HGM et al. Oil-based or water-based contrast for hysterosalpingography in infertile women. *N Engl J Med* 2017;**376**:2043–2052.
- Fang F, Bai Y, Zhang Y, Faramand A. Oil-based versus water-based contrast for hysterosalpingography in infertile women: a systematic

- review and meta-analysis of randomized controlled trials. *Fertil Steril* 2018;**110**:153–160.
- Melcer Y, Maymon R. 'One-stop shop' ultrasound evaluation of an infertile patients: doing less is no longer an option. *Hum Reprod* 2022;**37**:1952–1953.
- Wang R, van Welie N, van Rijswijk J, Johnson NP, Norman RJ, Dreyer K, Mijatovic V, Mol BW. Effectiveness on fertility outcome of tubal flushing with different contrast media: systematic review and network meta-analysis. *Ultrasound Obstet Gynecol* 2019;**54**:172–181.
- Wang R, Watson A, Johnson N, Cheung K, Fitzgerald C, Mol BWJ, Mohiyiddeen L. Tubal flushing for subfertility. *Cochrane Database Syst Rev* 2020;**10**:CD003718.

Nienke van Welie ^{1,*}, Joukje van Rijswijk¹, Kim Dreyer¹,
Ben Willem Mol^{2,3} and Velja Mijatovic¹

¹Department of Reproductive Medicine, Amsterdam UMC, Vrije

- Universiteit Amsterdam, Amsterdam Reproduction and Development Research Institute, Amsterdam, the Netherlands
- ²Department of Obstetrics and Gynaecology, Monash University, Clayton, VIC, Australia
- ³Aberdeen Centre for Women's Health Research, University of Aberdeen, King's College, Aberdeen, UK
- *Correspondence address. Department of Reproductive Medicine, Amsterdam UMC, Vrije Universiteit Amsterdam, Amsterdam Reproduction and Development Research Institute, De Boelelaan 1118, 1081 HV Amsterdam, the Netherlands.
E-mail: n.vanwelie@amsterdamumc.nl
 <https://orcid.org/0000-0001-8369-2871>

<https://doi.org/10.1093/humrep/deac133>
Advance Access Publication on June 17, 2022