Title

IUD expulsion risk by IUD frame type

Author

Creinin, Mitchell D

Publication Date

2024-08-01

DOI

10.1016/j.contraception.2024.110466

Peer reviewed

Contraception 136 (2024) 110466

Contents lists available at ScienceDirect

Contraception

journal homepage: www.elsevier.com/locate/contraception

Letter to the Editor

IUD expulsion risk by IUD frame type

To the Editor:

The report by Boehnke et al. [1] is an important secondary evaluation of the association of intrauterine device (IUD) frame geometry and IUD expulsion risk from a large prospective, nonrandomized trial. In the Discussion, the authors comment that their 12-month IUD expulsion rates of 2.9% (95% CI 2.4%–3.5%) and 2.4% (95% CI 2.1%–2.7%) for Tatum-T and Nova-T frames, respectively, are lower than previously reported. The authors reference a 2007 Cochrane review [2], the 2005 package insert for ParaGard [3], and a 2022 report with 927 nulliparous participants [4]. The most recent U.S. phase 3 IUD trial evaluated a levonorgestrel 52 mg IUD with a Nova-T frame and reported a 2.9% rate [5] among 1714 participants (58% nulliparous), which implies the rate reported by Boehnke et al. is actually in line with contemporary studies. More interesting are the 36-month expulsion rates of 4.6% (3.8%–5.4%) and 5.3% (4.7%–5.8%), which are higher than the 3.6% rate reported in both the same U.S. study of a levonorgestrel 52 mg IUD [5] and an international study of 1452 users of a smaller frame levonorgestrel 19.5 mg IUD [6]. However, an international study with 1452 smaller frame levonorgestrel 13.5 mg IUD users reported a 3-year expulsion rate of 4.6% [6]. The authors fail to discuss these more contemporary studies with broad populations. Overall, frame geometry and size are likely just one factor related to expulsion, and more studies are indicated to identify differences among IUDs with the same frame type to clearly identify differences in expulsion risk for a specific population.

Declaration of Competing Interest

Dr. Creinin has received speaking honoraria from Gedeon Richter, Mayne, OLIC, and Organon, served on Advisory Boards for Gedeon Richter and Mayne, has stock options with Femasys, and has consulted for Curai, Danco, Estetra SRL, Medicines360, and Organon. The Department of Obstetrics and Gynecology, University of California, Davis, receives contraceptive research funding for Dr. Creinin from Chemo Research SL, Evofem, Femasys, Medicines360, Merck, Sebela, and Sumitomo Pharma.

References

[1] Boehnke T, Bauerfeind A, Eggebrecht L, Cellier C, Lange JA, Heinemann K, et al. Does the shape of the copper intrauterine device play a role in expulsion? Results from the ongoing European Active Surveillance Study on LCS12. Contraception 2024:110444. https://doi.org/10.1016/j.contraception.2024.110444

[2] Kulier R, O'Brien PA, Helmerhorst FM, Usher-Patel M, D'Arcangues C. Copper containing, framed intra-uterine devices for contraception. Cochrane Database Syst Rev 2007(4):CD005347. https://doi.org/10.1002/14651858.CD005347.pub3

[3] FEI Women's Health LLC. Proposed Prescribing Information: ParaGard® T 380A Intrauterine Copper Contraceptive; 2005. https://www.accessdata.fda.gov/drugsatfda_docs/label/2005/018680s060lbl.pdf (accessed April 8, 2023).

[4] Hubacher D, Schreiber CA, Turok DK, Jensen JT, Creinin MD, Nanda K, et al. Continuation rates of two different-sized copper intrauterine devices among nulliparous women: Interim 12-month results of a single-blind, randomised, multicentre trial. EClinicalMedicine 2022;51:101554. https://doi.org/10.1016/j.eclinm.2022.101554

[5] Eisenberg DL, Schreiber CA, Turok DK, Teal SB, Westhoff CL, Creinin MD, et al. Three-year efficacy and safety of a new 52-mg levonorgestrel-releasing intrauterine system. Contraception 2015;92:10–6. https://doi.org/10.1016/j.contraception.2015.04.006

[6] Nelson A, Apter D, Hauck B, Schmelter T, Rybowski S, Rosen K, et al. Two low-dose levonorgestrel intrauterine contraceptive systems: a randomized controlled trial. Obstet Gynecol 2013;122:1205–13.

Mitchell D. Creinin *
Department of Obstetrics and Gynecology, University of California, Davis, Sacramento, CA, United States

*Corresponding author.
E-mail address: mdcreinin@ucdavis.edu

Received 8 April 2024
Accepted 11 April 2024

DOI of original article: https://doi.org/10.1016/j.contraception.2024.110444

https://doi.org/10.1016/j.contraception.2024.110466