Removal of Essure: TMTOWTDI

The choice of the title is deliberate. For the readers unfamiliar with "Tim Toady" (the correct pronunciation of TMTOWTDI), let us explain the parallels between the computer programming language Perl and Essure: both were popular in the 2000s and at present are all but dead! Essure was officially withdrawn from the U.S. market in 2018, and Perl was discontinued in 2019. The similarity is striking, and it does not end there! The popularity of Perl as a programming language was due to its versatility in accommodating differences in script—"There is more than one way to do it," or TMTOWTDI, was a defining motto. Ironically, we can now apply that motto to surgical techniques for removing Essure in patients who have adverse symptoms attributed to its insertion. There is clearly more than one way to do it! One technique with either a laparoscopic approach or a robot-assisted approach is explained in the video by Gracia et al. (1). Many other techniques have been described by other surgeons.

Essure was first introduced in 2002, and reports of adverse effects secondary to pelvic pain or nickel allergy started appearing by mid-2000. Individual reports of removal started surfacing soon after. By 2013, the criteria for attempting hysteroscopic removal and laparoscopic removal with preferred techniques was published by Albright et al. (2). Hysteroscopic removal was advised in very narrow circumstances of either expulsion into the uterine cavity or within 6 weeks after insertion. In all other cases, laparoscopic salpingectomy was advised in preference to laparoscopic removal of Essure.

The basic technique itself can be broken down into three steps: incise the fallopian tube and identify the tubal end of the Essure insert; remove the cornual end of the Essure insert; and perform salpingectomy. The details of how to perform steps 1 and 2 have differed. For step 1, some have advocated a longitudinal incision on the antimesial edge of the tube near the cornua; others prefer a transverse incision as described in this video. Still others have advised complete transection of the tube along with the insert (3). For step 2, some advocate the gentle but firm disengagement of the insert from the cornua, but others prefer to forego step 1 and simply perform a cornuectomy. Those who prefer not to tug/pull on the insert have a valid cause for concern: the insert can fragment and leave pieces behind. Obviously, leaving behind fragments of the insert is undesirable, given the indication for the surgery in the first place.

It is no wonder that Sills et al. (4) found that the vast majority (64.9%) of 3,803 women who underwent surgery for Essure removal ended up having a hysterectomy rather than simple removal of Essure. Because these data were gathered by survey, it is not known whether this decision was prompted by a lack of skill on the part of the surgeon, or was secondary to the patient's preference, or was a combination of both (4). Although the 1,035 women reported removal of Essure or salpingectomy in the Sills survey, a limited case series with three patients described a technique for Essure removal followed by reimplantation of the tube to the uterine fundus with demonstration of successful recanalization of at least one tube by hysterosalpingogram (5).

These surgical techniques will be used less and less frequently in the coming years because no new patients are currently receiving these inserts. However, the debate and the description of the surgical techniques will remain valid and relevant long after Essure insertion fades into history because innovation will continue its relentless march. Newer methods of hysteroscopic sterilization will inevitably surface in the future, and no one can predict the potential adverse effects those may bring! To quote businessman Michael Eisner, "There's no good idea that cannot be improved on," and all good ideas need to be preserved for posterity!

Bala Bhagavath, M.D.[a]
Steven Lindheim, M.D., M.M.M.[b]
[a]University of Wisconsin-Madison, Department of Obstetrics and Gynecology, Madison, Wisconsin; and [b]Wright State University, Boonshoft School of Medicine, Department of Obstetrics and Gynecology, Dayton, Ohio

https://doi.org/10.1016/j.fertnstert.2020.04.035

REFERENCES

1. Gracia Herraez, Coronado. Essure removal: comparison of two minimally invasive approaches. Fertil Steril 2020;114:187–8.
2. Albright CM, Frishman GN, Bhagavath B. Surgical aspects of removal of Essure microinsert. Contraception 2013;88:334–6.
3. Lazorwitz A, Tocce K. A case series of removal of nickel-titanium sterilization microinserts from the uterine cornua using laparoscopic electrocautery for salpingectomy. Contraception 2017;96:96–8.
4. Sills ES, Li X, Wood SH, Jones CA. Analysis of surgeries performed after hysteroscopic sterilization as tabulated from 3,803 Essure patient experiences. Obstet Gynecol Sci 2017;60:296–302.
5. Clark NV, Einarsson JI. A novel technique for Essure reversal. JSLS 2019;23:e2018.00098.