Published in final edited form as:

Fertil Steril. 2019 November ; 112(5): 829–830. doi:10.1016/j.fertnstert.2019.08.068.

A different time for tubal surgery

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“An object in motion tends to remain in motion along a straight line unless acted upon by an outside force.”

—Isaac Newton

Looking back at the November-December issue of 1969, it is clear to see this was a crucial year of transition for tubal surgery. For this is the issue where we start to see the ineffective attempts at tubal reimplantation and the emergence of end-to-end anastomosis, and we come to understand why the current ASRM committee opinion on tubal surgery has banished tubal reimplantation “to historic interest only, as it is associated with very low success rates and risk of cornual rupture in pregnancy” (1).

Glass et al. (2) reported on fifty women who underwent tubal surgery in the setting of chronic pelvic inflammatory disease. Eight of these patients underwent bilateral reimplantation of the fallopian tubes, and only one of them achieved pregnancy, which was an ectopic. Although the number of unilateral reimplantations was not reported, only one of the fourteen pregnancies that occurred out of fifty women was a result of unilateral reimplantation. This same patient was noted to have a normal contralateral fallopian tube after lysis of a few thin adhesions.

Similarly, Mroueh (3) reported on the outcomes after unilateral tubal reimplantation in 20 rabbits with proven fertility who were then mated with bucks. Four animals underwent surgical exploration 24 hours after mating, while the rest underwent surgical exploration 10 days after mating. In all rabbits, implantation sites were identified in the contralateral uterine horn, but none were identified in the horn in which tubal reimplantation had been performed. In the four rabbits in which exploration was performed 24 hours after mating, fertilized eggs were able to be flushed from the reimplanted fallopian tube, indicating that tubal reimplantation maintained patency to allow for sperm passage, but that the resulting tubal dysfunction was enough to prevent normal implantation.

Finally, the third article (4) featuring tubal surgery reported on a single case of end-to-end tubal reanastomosis in a patient wanting to reverse her bilateral tubal ligation. The patient became pregnant, and the pregnancy resulted in a successful term live birth. While many aspects of this case were different from modern-day tubal reanastomoses (such as attaching a sterile safety pin to a nylon suture and threading it up through the uterus), the overall technique of tubal reapproximation was similar. Additionally, Barr confirmed that the patient was ovulatory and her husband had a normal semen analysis prior to performing the procedure. These tests are still an important part of the preoperative evaluation of a couple hoping to conceive after tubal reanastomosis today.

The November-December 1969 issue of *Fertility and Sterility* provided a snapshot in time in a year that was a turning point for tubal surgery. The first two studies show a lack of efficacy of tubal reimplantation, while the single case of end-to-end reanastomosis was a novel approach that is still performed today. However, in 2019, tubal surgery is becoming rarer due to a combination of factors such as the success of in vitro fertilization and the decline in infertility providers who are skilled in microsurgery techniques. All one needs to do is read the August 2019 Views and Reviews (5) in *Fertility and Sterility* to grasp how significantly this area has changed in our field. Tubal surgery was on an upward trajectory until the 1990s, and in vitro fertilization was the force that altered the trajectory and put tubal surgery on its new, downward path.

REFERENCES

1. Practice Committee of the American Society for Reproductive Medicine. Role of tubal surgery in the era of assisted reproductive technology: a committee opinion. *Fertil Steril* 2015;103:e37–43. [PubMed: 25958255]
2. Glass RH, McCarthy CP, Buxton CL. Prognosis in tubal plastic surgery. *Fertil Steril* 1969;20:919–23. [PubMed: 5361466]
3. Mroue A. Effect of tubal implantation on rabbit fertility. *Fertil Steril* 1969;20: 928–32. [PubMed: 5361468]
4. Barr SJ. Successful end-to-end tuboplasty following previous ligation. Report of a case. *Fertil Steril* 1969;20:924–7. [PubMed: 5361467]
5. Lindheim SR, Estes SJ. Reproductive surgery: glimpses into the past and thoughts for the future (part 1). *Fertil Steril* 2019;112:181–2. [PubMed: 31352956]