Peer Review File

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Reviewer A

1. **Comment:** Please, remove the "Narrative review" of your title and put in the method.
   Reply: An excellent suggestion by the reviewer.
   Changes in text: Removed "Narrative review" in title. We did not include it in the methods section as we feel that it is redundant there.

2. **Comment:** Please, improve the organization and concatenation of your manuscript information.
   Reply: We presumed that the reviewer would like improvements to the flow of the manuscript, but we are not sure exactly how to do this. The manuscript is guided by an outline that is essential chronological and deductive (from general to specific) in nature:
   - Introduction
   - Birth of microsurgery
     - Technology
     - Microsutures
     - Microsurgeons
   - Microsurgery in Urology
     - Renal vascularization
     - Penile revascularization/phalloplasty
     - Testicular autotransplantation
     - Reproductive urology
       - Obstruction
       - Varicocelectomy
       - Sperm retrieval
   - Conclusions

   We welcome constructive criticism on how we can improve on this!
   Changes in text: None

3. **Comment:** Please, put the REFERENCES in journal rules.
   Reply: We apologize for not consistently adhering to TAU referenced guidelines.
   Changes in text: All references are formatted to ensure that it is consistent with TAU style guidelines.

Reviewer B

1. **Comment:** Page 2, Lines 54-55. The authors discuss the first microsurgical vasovasostomy as being reported by Sherman Silber in San Francisco. In 1975, he described a proposed

technique. No report of its use or outcomes. In fact, Earl Owen of Australia, with whom Sherman Silber did a microsurgery fellowship, reported his series on microscopic vasectomy reversal in 1977, the same year as Sherman Silber's first series. (Owen, 1977, Aust N Z J Surg; 47:305; Silber, 1977, Fertil Steril; 28:1191). Each of them claim to have invented the technique.
Reply: The reviewer presents an insightful factual reference point which we will incorporate into the manuscript by emphasizing that both investigators published their descriptions of the microsurgical vasovasostomy in 1977.
Changes in text: Shared credit given to Owen and Silber for microscopic vasovasostomy.

2. **Comment:** Page 3, Lines 83-87; The author discusses Carrel's use of fine needle technique for anastomosis of the blood vessels. This took place at Rockefeller Institute (now University) in New York City, rather than at University of Lyon, as is implied earlier in the paragraph.
Reply: The reviewer presents an insightful factual reference point which we incorporated into the manuscript by deemphasizing the University of Lyon as the location where Carrel made his discovery.
Changes in text: Emphasized the fact that the Carrel's discovery occurred later in life, after his training at the University of Lyon.

3. **Comment:** Pages 9-10, Lines 277–279. Here the authors discuss the progression of vasoepididymostomy techniques. Initially discussing Silber's end-to-end approximations reported in 1978, they then discuss the end-to-side popularized by Thomas in 1987. In fact, the first microsurgical end-to-side epididymovasostomy was reported by Fogdestam in 1986 (Fogdestam, 1986, Fertil Steril; 46:925).
Reply: The reviewer presents an insightful factual reference point which we have incorporated into the manuscript
Changes in text: We note that the technique was first described by Fogdestam and popularized by Thomas.

4. **Comment:** Page 10, lines 284–290. The authors describe the 1991 technique for vasoepididymostomy by Berger and Marmar as "the most recent innovation in the epididymal-vasal analstomosis...". However, Peter Chan, Philip Li and Marc Goldstein, introduced the two-suture longitudinal intussusception vasoepididymostomy (LIVE) in 2004, which is now considered the most reliable technique for vasoepididymostomy (Chan, Li & Goldstein, 2003, J Urol; 169:1924)
Reply: The goal of this review is to present the significant (e.g. milestone) advances in urological microsurgery. In our view, the 1991 description of the intussesception epididymovasostomy technique represents a significant heuristic departure from the established mucosa-to-mucosa anastomotic technique described 15 years prior. By contrast, we view the LIVE technique described in 2004 as a variation of the intussesception technique, and one of several that have been reported.
Changes in text: None

5. **Comment:** Page 11, Lines 319–322. The authors describe Marmar's 1994 report of employing surgical microscopes for varicocelectomy and implied that this was the first use of the operating microscope. However, microsurgical varicocelectomy was first reported by Dwosh and Goldstein in 1985, and the first large series in 1992 (Goldstein, et al., 1992, J Urol; 148:1808). Joel Marmar did, however, introduce the subinguinal incision for varicocelectomy.
   Reply: The reviewer presents an insightful factual reference point which we have incorporated into the manuscript.
   Changes in text: We credit Goldstein for first reporting the use of operative microscopy for varicocele repair and Marmar for applying it to procedures at the subinguinal level.