
EDITORIAL

Keeping Our Morcellators Straight in Minimally Invasive Surgery

I was recently seeing a patient for lower urinary tract symptoms due to benign prostatic enlargement. He had a very large prostate (over 150 gm). I explained the steps of the holmium laser ablation of the prostate (HoLEP) which involves morcellation as his best option. A colleague in our Department is known for his HoLEP expertise and I was preparing a referral. Suddenly, the patient's wife stopped me and said "Did you say morcellation? That is a dangerous procedure and he should not do that." When I asked about her concern, she mentioned a recent documentary "Kicking the Hornet's Nest", a film designed to end the practice of power morcellation portrayed as "...a common surgery with deadly consequences".

The morcellator was the subject of this documentary addressing laparoscopic morcellation and spreading of undetected cancer in uterine fibroids. It was simply the use of the device itself that caused the wife's concern. In the HoLEP procedure, the morcellator is used inside the bladder to remove the enucleated prostate adenoma whereas the film's negative view of the morcellator was based on its former use in laparoscopic hysterectomy procedures spreading high-grade uterine sarcoma. The award-winning documentary is available in streaming outlets such as Amazon Prime Video, Apple TV, and others. It was featured the April 16, 2021 issue of "The Cancer Letter".¹

The poor outcomes of morcellation with laparoscopic uterine surgery resulted in investigations and FDA actions and changed the way gynecologists approach laparoscopic uterine surgery. The FDA issued a warning in November 2014 against use of uterine power morcellation because of risk for dissemination of malignant tissue. In December 2020, the FDA issued an updated Safety Communication noting that morcellation is appropriate only when used with a tissue containment system during laparoscopy.²

HoLEP is endorsed by the American Urological Association (AUA) as a treatment for benign prostatic obstruction and involves the use of a holmium laser to transurethrally enucleate the obstructing adenoma. The technique was first described by Dr. Peter Gilling in 1995 and has been recently reviewed.³ HoLEP enucleates the transition zone of the prostate replicating an open simple prostatectomy. A morcellator is then used to cut up and suck out the pieces of tissue for pathology. While endorsed by the AUA for any size prostate, HoLEP it is most often used for larger benign prostates that would otherwise require an open or laparoscopic procedure. Are there any safety concerns with the use of morcellators in the HoLEP procedure?

A recent review of the Manufacturer and User Facility Device Experience (MAUDE) database studied all contemporary BPH treatments.⁴ BPH devices were evaluated for malfunction and complications. In over 2567 MAUDE reports, HoLEP accounted for 39 reports or only 1.52%. Morcellator use was observed in a few higher-grade complications with improper operator use commonly cited a cause. While unrecognized prostate cancer diagnosis with HoLEP has been reported, the choice of this BPH surgical technique when compared to other procedures had no influence on the detection of incidental prostate cancer.⁵ While technical complications such as bleeding and bladder injury are rare with HoLEP and morcellation, there have been no reports of dissemination of prostate cancer in contradistinction to the uterine fibroid cancer outcomes.

Advances in minimally invasive surgery often depend on the use of highly specialized devices such as the tissue morcellator. When counselling patients about different minimally invasive surgical procedures, patients should be made aware of the context in which morcellators are used. Patients are more likely to learn about the dangers of morcellators from a streaming video service than the benefits these devices offer in the minimally invasive management of the enlarged prostate.

Leonard G. Gomella, MD, Editor in Chief / Philadelphia, PA, USA

References

1. https://cancerletter.com/filmtv/20210416_3/
2. <https://www.fda.gov/medical-devices/safety-communications/>
3. Das AK, Teplitsky S, Humphreys MR. Holmium laser enucleation of the prostate (HoLEP): a review and update. *Can J Urol* 2019;26(4 Suppl 1):13-19.
4. Patel NH, Uppaluri N, Iorga M et al. Device malfunctions and complications associated with benign prostatic hyperplasia surgery: review of the manufacturer and user facility device experience database. *J Endourol* 2019;33(6):448-454.
5. Herlemann A, Wegner K, Roosen A et al. "Finding the needle in a haystack": oncologic evaluation of patients treated for LUTS with holmium laser enucleation of the prostate (HoLEP) versus transurethral resection of the prostate (TURP). *World J Urol* 2017;35(11):1777-1782.