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New Technique

A simple technique of tissue collection after morcellation during holmium laser enucleation of the prostate

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Holmium laser enucleation of the prostate (HoLEP) has stood the test of time for management of benign enlargement of prostate [1]. Multiple studies since 1990 have shown good results with HoLEP, which are comparable to the results of transurethral resection of the prostate [2–4].

The standard steps of HoLEP are: Identification of the prostatic capsule by bladder neck incisions, enucleation of the median and lateral lobes, and then morcellation of the lobes to remove the enucleated adenoma from the urinary bladder [5]. Transurethral morcellation of enucleated lobes has made it possible to perform single stage procedures for larger prostatic adenomas [6].

The two morcellators that are commonly used are the Wolf Piranha™ Morcellation System (Germany) and the Lumenis VersaCut™ Morcellator (Yokneam, Isreal). The basic design of the morcellator has a suction and a cutting blade. The suction holds the tissue on the cutting edge and aspirates out the morcellated tissue from the bladder, while the moving blade cuts the tissue in small pieces. The Wolf morcellator has an inbuilt tissue collection device. The Lumenis VersaCut morcellator has no such collection device. The newer VersaCut Plus morcellator has an inbuilt tissue collection system but this morcellator is not widely available. For the VersaCut morcellator a gauze piece on a sieve is used to strain the returning fluid and filter the morcellated tissue exiting the suction tubing.

Such tissue collection on a sieve has many small problems. Small pieces of tissue can escape through the apertures of the sieve and hence some tissue can get lost. If the returning tube is not properly held on the sieve, there can be spillage of returning fluid during tissue collection and hence loss of tissue. The tissue gets stuck to the gauze piece or the wires of the sieve and is difficult to remove (Fig. 1).

We present a novel and simple method to collect morcellated tissue after Lumenis VersaCut™ morcellation and compare that technique to the standard sieve technique.

In the new tissue collection technique, a double layered, transparent, polythene bag is attached to the end of the exit tube of the morcellator using adhesive tapes (Fig. 2). Multiple (10–15) punctures are made in the polythene bags using an 18-gauge needle to allow for the free efflux of the aspirated fluid. Additional punctures are made if the bag gets filled during morcellation. The bag is kept in a bucket used to collect the drained fluid. The bag does not need to be sterile as it is not in the operation field.

Once the enucleation is completed, the morcelloscope is inserted through the outer sheath of the resectoscope and morcellation performed. The morcellated tissue that gets

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Figure 1 Morcellated tissue stuck in the gauze piece.

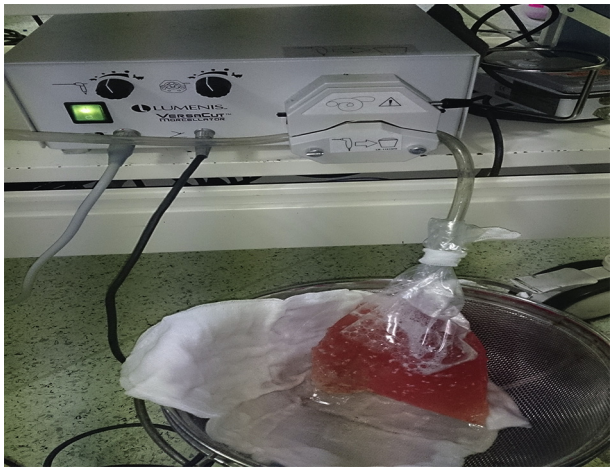

Figure 2 Polythene bag fixed to exit tubing by adhesive tape.

sucked out through the exit tubing gets collected in bag. The bladder fluid gets drained through the punctures in the bag. Once the procedure is over, the bag is cut open and the tissue is transferred to specimen bottle.

This technique has been used in more than 125 patients in last 3 years. The morcellated tissue was collected completely in the bag in all patients. Removal of tissue from the bag was very easy as the polythene bag has a smooth inner surface and the tissue does not get stuck to it. One patient had spillage of fluid from the bucket but as the tissue was captured in the bag there was no tissue loss. The polythene bags were freely available and cheap and could sustain the irrigation without any episode of bag rupture. None of the patients had bag dislodgement.

To conclude, morcellation is an integral part of HoLEP as it provides good quality tissue for histopathology examination [7]. Setting-up the polythene bag method to collect the morcellated tissue is easy and rapid. The risk of tissue loss and spillage is negligible and as the polythene bags are freely available there is no added cost to the patient.

Author contributions

Study concept and design: Pankaj N. Maheshwari.
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Drafting of manuscript: Pankaj N. Maheshwari, Nick Okwi.
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Conflicts of interest

The authors declare no conflict of interest.

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