En Bloc Thulium Laser Enucleation of the Prostate: A Step-by-Step Guide to Improve Enucleation Time and Efficiency for Endoscopic Enucleation of Prostatic Adenoma

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OBJECTIVE
To present a reproducible step-by-step approach to en bloc thulium laser enucleation of the prostate (ThuLEP) for benign prostatic hyperplasia surgical treatment. Laser adenoma enucleation is nowadays a recognized surgical treatment for benign prostatic enlargement. Some variants to the classical 3-lobes laser technique have been proposed, in order to overcome the main concerns regarding the original procedure. After a vast experience with the 3-lobes ThuLEP, we developed our own en bloc enucleation technique.

METHODS
The capsular plane is identified only once, at the level of the prostatic apex, at 5 o’clock; this plane is followed ascending towards the bladder neck, separating the left lobe from the prostatic capsule from 5 to 11 o’clock. The right and median lobes are then enucleated following the same plane clockwise and the 2 planes are joined anteriorly at 11 o’clock. Finally, enucleation is completed by incising the remaining mucosal flap from 10 to 2 o’clock. We have already proved the clear advantages provided by this technique compared to the “3-lobes” enucleation.

RESULTS
Our single-center experience with this technique includes 140 procedures performed up to June 2018. Mean prostatic adenoma volume was 66.7 mL (range 20-220 ± 32.85 standard deviation [SD]). Mean total surgical time was 60.93 minutes (25-133 ± 23.6 SD); mean enucleation time was 18.3 minutes (8.2-36.53 ± 5.62 SD), mean enucleation time normalized per adenoma gram was 0.32 min/g (0.12-0.8 ± 0.15 SD) and mean energy needed for the enucleation normalized per adenoma gram was 1852.13 J/g (689-6129 ± 862.4 SD). Only 1 case of reintervention for clot evacuation (Clavien grade IIIb) was necessary.

CONCLUSION
En bloc ThuLEP provides an anatomical approach for endoscopic enucleation of prostatic adenoma. We believe that this sequence optimizes efficiency and efficacy in a reproducible way.

References