

## EDITORIAL

### Which is the gold standard in BPH surgery?

*Ana Loizaga Iriarte, Nerea Senarriaga Ruiz de la Illa and Miguel Unda Urzaiz.*

*Department of Urology. Basurto Hospital. País Vasco University. Bilbao. Spain.*

Two editorials have been published in the Spanish journal *Archivos Españoles de Urología* in recent years, under the highly expressive titles of "Que me quede como estoy" (Let Me Stay as I Am), by Dr E. Sánchez de Badajoz (1) and "La indicación terapéutica ¿es una categoría inmutable?" (Therapy: An Immutable Category?), by Dr A. Gelabert (2). They are about the reluctance of the scientific community in general -and of urologists, in particular- to accept recent advances in surgery.

The first laparoscopic surgeries performed by general surgeons who removed gall bladders in surgeries lasting 6 to 8 hours, under the scrutiny of their colleagues and with many conversions to open surgery are too recent to have been forgotten. A similar attitude prevailed when certain urologists in units headed by colleagues who were open to innovation and technological development -currently two buzzwords for many politicians- decided to promote and encourage less aggressive surgery, to the benefit of their patients. Thus, they began their careers in ileum obstruction following lymphadenectomies, varicocelectomies and surgery to correct urinary incontinence in women.

Currently, however, no one questions the fact that laparoscopy was a breakthrough in surgical techniques. Those who proclaimed far and wide they would never perform that sort of surgery in their units had to bow to the evidence or have retired.

We could speak in a similar vein of surgery for benign prostate hyperplasia. When transurethral resection became a standard procedure in the 70s, it was a highly important breakthrough that lowered morbimortality rates in retropubic or transvesical adenomectomies, and yet some urologists took a long time in integrating it into their daily practice.

Since then, many competitors have sought to oust it from its privileged position. None have succeeded. The necroses caused by various sources of energy or chemical agents, dilations by means of

## EDITORIAL

high-pressure balloons, urethral stents, electrovaporization and laser contact vaporization. They all came and went without widespread use. Transurethral resection for small prostates and retropubic adenomec-tomy for large ones are still surgical benchmarks, with the decision to use one or the other depending on the urologist's skill and experience.

Currently, two new lasers have become available to us: KTP and Holmium. Both have proved effective in treating BPH. They both diminish the morbimortality of prostate surgery with shorter hospital stays and catheter days than the usual surgery, TUR and adenomec-tomy, and with comparable clinical outcomes if the surgery is done properly.

Nonetheless, there is an important difference between the two types of laser: KTP only vaporizes. Although its power has increased to 120 W, it is mostly useful for small prostates, unless it is in highly expert hands. The same is true of TUR. For small prostates, the advantage of GreenLight laser compared to TUR is minimal due to its cost.

Holmium laser allows vaporization in a way similar to the KTP laser, but it has the great advantage of being used to enucleate, so it can replace TUR as well as an adenomec-tomy. Enucleation allows surgery to be performed as we would retropublically, but with the advantages of endoscopy and lower morbidity. This is what really makes a difference. To exchange a retropubic or transvesicular adenomec-tomy for endoscopic surgery with no blood transfusions, with less than 24-48 hours' hospitalization and even less hours with a urethral catheter is a significant qualitative leap. Another difference versus vapo-rization is the fact of having all the tissue with which to make an anatomopathological study; an added value in patients with a PSA higher than 2.5 ng/ml.

The cost of investing in a Holmium laser is diluted since it can be used in other pathologies such as lithiasis, certain tumours, strictures, skin lesions on the penis and other diseases.

It is true that, unlike vaporization, enucleation is a complex technique that is difficult to master and that very few hospitals have included it in their surgery programme due to its learning curve. This could lead us to believe that we are repeating the reluctance we showed towards new surgery that we did not learn at the outset of our career as urologists, but which presents many advantages and only one notable drawback: we have to learn a difficult technique when we already have another way of resolving the pathology correctly. This really is innovation and progress.

Nonetheless, the number of urologists who are beginning to use this sort of surgery is gradually increasing. The hospitals of Povisa in Vigo, 12 de Octubre in Madrid, Bellvitge in Barcelona and Morales Meseguer in Murcia have joined the forerunners: Carlos Haya Hospital in Málaga, Basurto Hospital in Bilbao, Hospital del Mar in Barcelona and La Paz Hospital in Madrid.

Treatment with Holmium laser became available 10 years ago, and since then it has been backed by much more bibliography than the KTP laser, for which there are no randomized studies with long-term follow-ups that can prove the reliability of vaporization and the absence of retreatment (4-7).

Marketing new Diode type lasers (8) with a wavelength of 980 nm for vaporizing like KTP but with reusable fibres, of 1470 nm that allow enucleation, and of Thulium (9), which also allows enucleation will lower prices and make the purchase less onerous than it is now.

## EDITORIAL

Let us hope that, as with other complex surgical techniques, enucleation will become widespread and end up being a new gold standard for treating BPH. Then vaporization would only be used for small prostates and patients on aggregation inhibitors or anticoagulants who cannot suspend the treatment (10).

We are convinced that laser prostate surgery has come to stay. Only time will tell.

### REFERENCES AND RECOMENDED READINGS (\*of special interest, \*\*of outstanding interest)

- \*1. Sánchez de Badajoz E. Que me quede como estoy. Arch Esp Urol, 2005; 58: 93-94.
- \*2. Gelabert A. La indicación terapéutica ¿Es una categoría inmutable? Arch Esp Urol, 2006; 59: 763-65.
3. Rioja C, Blas M, Rioja LA. Linfadenectomía laparoscopica. Indicaciones actuales. Arch Esp Urol, 2002; 55: 667-68.
- \*\*4. De la Rosette J, Alivizatos G. Lasers for the treatment of the bladder outlet obstruction: Are they challenging conventional treatment modalities? Eur Urol, 2006; 50:418-20.
- \*\*5. Kuntz R M. Current role of lasers in the treatment of benign prostatic hyperplasia. Eur Urol, 2006; 49:961-69.
6. Montorsi F, Naspro R, Salonia A, Suardi N, Briganti A, Zanoni M, et al. Holmium Laser enucleation versus transurethral resection of the prostate: Results from a two centre prospective randomized trial in patients with obstructive benign prostatic hyperplasia. J Urol, 2004; 172: 1926-29.
7. Kumar S.M. Photoselective vaporization of the prostate: A volume reduction analysis in patients with lower urinary tract symptoms secondary to benign prostatic hyperplasia and carcinoma of the prostate. J Urol, 2005; 173: 511-13.
8. Seitz M, Sroka R, Grtzke C, Schlenker B, Steinbrecher V, Khoder W, et al. The Diode Laser: A novel side-firing approach for the laser vaporization of the human prostate. Immediate efficacy and a 1-year follow-up. Eur Urol, 2007; 52: 1717-22.
9. Xia SJ, Zhuo J, Sun XW, Han BM, Shao Y. and Zhang YN. Thulium Laser versus standard transurethral resection of the prostate: A randomized prospective trial. Eur Urol, 2008; 53: 382-90.
10. Gillig P. Laser vaporization of the prostate: Are we there yet? Eur Urol, 2007; 52: 1569-70.