

Inflatable Penile Prosthesis

Opinion: Why I prefer the penoscrotal access

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The therapeutic arsenal of erectile dysfunction has in implant penile prostheses an option of third row, behind the phosphodiesterase-5 inhibitors and intracavernosal therapy. However, the satisfaction rate of treatment of erectile dysfunction with penile prostheses achieves excellent results, between 75 and 100% (1).

The type of prosthesis to be implanted, inflatable or malleable, depends mainly on the economic condition of the patient, because the high cost of inflatable implants compared to malleable. Other factors may also influence the choice of the type of prosthesis, such as the capacity and ability of the patient to manipulate the scrotal pump, the surgeon's experience (2), specific clinical cases (3) and patient preference.

The choice of surgical access for penile implants depends on the surgeon's choice in most cases. To proceed with complex cases, the surgical team must have knowledge of several accesses alternatives to perform penile implants. The literature demonstrates that most of the implants are performed by penoscrotal access (2, 4). A paper published by Johns Hopkins Group with cases of concomitant penile prosthesis implant and artificial urinary sphincter, reported the choice of penoscrotal access to the penile implant (5).

A very interesting study comparing penile prosthesis implant surgery before and after Expert Training with Standardized Operative Technique for residents demonstrated that after the training, penoscrotal access increased from 52.2% to 97.8% (2).

The American Urological Association Guideline of Erectile Dysfunction of the, published in 2005 and revised in 2011 does not provide any guidance to the accesses procedures for implantation penile prostheses (6).

The Guideline of Male Sexual Dysfunction of the European Urological Association, updated in March 2015, devotes a paragraph to discuss the surgical access options for implantation of inflatable penile prosthesis (7). The advantages of the penoscrotal access reported in this paper are:

- The penoscrotal approach provides an excellent exposure.
- It affords proximal crural exposure if necessary.
- Avoids dorsal nerve injury.
- Permits direct visualization of pump placement.

The disadvantage highlighted for the penoscrotal approach is that the reservoir is blindly placed into the retropubic space, which can be a problem in patients with a history of major pelvic surgery (mainly radical cystectomy).

Furthermore this document reinforces the idea that revision surgery is associated with decreased outcomes and may be more challenging with the infrapubic approach.

The ISSM Consensus in Chapter 18 (8), dedicated to penile implants reports that there is no clear advantage of one type of access or other, and the choice depends on the surgeon's preference and that the literature data showed that the incidence of infection is similar between the penoscrotal and infrapubic access. The text reported also that penoscrotal access is easier in severely obese patients.

Candela & Hellstrom presented retrospective study comparing satisfaction of the patients submitted to implantation of 3 volume inflatable penile prosthesis with penoscrotal and infrapubic access through a questionnaire sent to 86 patients. Analysis of the 42 questionnaires returned demonstrated no statistical differences in the replies of the two groups in either the factual or perceptual data (9).

The Cleveland Clinic published in 2003, that the penoscrotal approach is preferably. The reasons are that the penoscrotal approach avoids possible injury to the dorsal sensory nerves, provides easier and more complete corporeal exposure, and allows the pump to be anchored in the scrotal pouch (10).

My personal preference for penoscrotal access to implant inflatable penile prosthesis relies on the available data reported above, and also by teaching facility in residency training program of the same approach of access to implant both malleable as inflatable prostheses.

REFERENCES

1. Trost LW, McCaslin R, Linder B, Hellstrom WJ. Long-term outcomes of penile prostheses for the treatment of erectile dysfunction. *Expert Rev Med Devices*. 2013;10:353-66.
2. King AB, Klausner AP, Johnson CM, Moore BW, Wilson SK, Grob BM. Expert training with standardized operative technique helps establish a successful penile prosthetics program for urologic resident education. *J Sex Med*. 2011;8:2726-32.
3. Köhler TS, Modder JK, Dupree JM, Bush NC, McVary KT. Malleable implant substitution for the management of penile prosthesis pump erosion: a pilot study. *J Sex Med*. 2009;6:1474-8.
4. Pereira Arias JG, Escobar Tamayo V, Marañón Fernández MT, Astobieta Odriozola A, Bernuy Malfaz C. Penile prosthetic implant in the treatment of impotence: our experience. *Arch Esp Urol*. 1994;47:703-8.
5. Segal RL, Cabrini MR, Harris ED, Mostwin JL, Bivalacqua TJ, Burnett AL. Combined inflatable penile prosthesis-artificial urinary sphincter implantation: no increased risk of adverse events compared to single or staged device implantation. *J Urol*. 2013;190:2183-8.
6. Montague DK, Jarow JP, Broderick GA, Dmochowski RR, Heaton JP, Lue TF, et al. Chapter 1: The management of erectile dysfunction: an AUA update. *J Urol*. 2005;174:230-9.
7. Hatzimouratidis K, Eardley I, Giuliano F, Hatzichristou D, Moncada I, Salonia A, et al. Guidelines on Male Sexual Dysfunction: Erectile dysfunction and premature ejaculation. 2013: pp. 4-52 available at http://uroweb.org/wp-content/uploads/14-Male-Sexual-Dysfunction_LR.pdf
8. Hellstrom WJG, Montague DK, Moncada I, Carson C, Minhas S, Faria G, Krishnamurti, S. Committee 18: Implants, Mechanical Devices, & Vascular Surgery for Erectile Dysfunction. 2013; pp In <http://www.issm.info/images/book/Committee%2018/>
9. Candela JV, Hellstrom WJ. Three-piece inflatable penile prosthesis implantation: a comparison of the penoscrotal and infrapubic surgical approaches. *J La State Med Soc*. 1996;148:296-301.
10. Montague DK, Angermeier KW. Surgical approaches for penile prosthesis implantation: penoscrotal vs infrapubic. *Int J Impot Res*. 2003;15(Suppl 5):S134-5.

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