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Editorial

Organic erectile dysfunction appears to occur frequently as a consequence of abnormal corporal veno-occlusive hemodynamics [1]. Result of this is an inadequate corporal body pressure effecting an insufficient rigidity to have successful coitus. Today it seems to be established that intracorporeal pressure parameters differ significantly between impotent men and healthy controls [2] although there is a clear overlap between both groups, demonstrating the difficulties of a clear discriminating diagnosis in several cases. Rudnick and Becker summarize in this issue the present status of diagnostic management in their experience.

The rationale of successful venous surgery is not really known and often sufficiently determined for only an uncertain period of time. Nevertheless, some patients demonstrating corporeal veno-occlusive dysfunction undergo successful venous penile surgery with the aim of increasing venous outflow resistance, others do not.

Surgery involves the ligation or resection of the deep dorsal penile vein, cavernous and crural veins, or spongiolysis. Wooten [3] first reported improvement in the erectile function of impotent men treated with simple deep dorsal vein ligation. Lowsley and Bray [4], described a similar procedure with dorsal vein ligation coupled with plication of the ischiocavernosus muscles.

This procedure seems to us very similar to the widely accepted approach of deep dorsal vein resection (DDVR) in venous surgery, especially propagated by Wespes [5] and later on by Lewis [6]. This type of surgery primarily targets the deep dorsal vein including ectopic and cavernous veins [5, 6]; in some cases, ligature of the crural veins and spongiolysis may be added to the procedure. The surgical approach of choice is the infrapubic or penoscrotal incision with deep dorsal vein ligation/resection under artificial erection conditions as proposed earlier [6]. The overall results up to present of this type of venous surgery, commonly addressed as DDVR, are summarized in table 1.

In our opinion, this standardized procedure of DDVR is a viable alternative in the treatment of veno-occlusive dysfunction with an overall success rate up to 50% in the immediate postoperative time, changing to worse results at later follow-ups. Prerequisites for a benefit of this operation are first the exclusion of an arterial cofactor includ-

Table 1. Results of venous surgery of the deep dorsal vein according to the data reported in the literature (modified according to Lewis [6] and Wespes [5])

Author	Patients	Type of surgery	Patients cured		Average follow-up months
			n	%	
Wespes [5]	67	DDVL, DDVR	31	46	24–72
Lewis [6] (Mayo series)	28	DDVR	14	50	12
Lunglmayr et al. [7]	29	DDVR	9	31	4–24
Luc [8] (1987–1988)	64	DDVR and crural vein resection	36	56	2–26
Weidner et al. [9]	51	DDVR	28	55	20

DDVL = Deep dorsal vein ligation.

ing hints for an important cavernosal defect of smooth muscles; second, a strict selection of patients with an abnormal drainage via the penile dorsum, and third, from a surgical point of view, the total removal of the deep dorsal vein with its tributaries as described by Lewis in this issue. For us, the infrapubic incision is satisfactory, others [8] prefer an anterior scrotal incision for better dissection conditions of the cavernosal veins.

Efforts of other types of venous surgery focus especially on the crural veins, drainage via the glans and corpus spongiosum, and cases with global venous insufficiency. We personally do not believe in a long-lasting improvement of these venous surgical procedures, i.e. crural ligation [10] or spongiolysis [11], in these types of veno-occlusive dysfunction. Nevertheless, the outcome of these procedures has to be reanalyzed very critically by experts in this field in several papers of this issue.

Especially global venous insufficiency, that means combined drainage via several venous draining systems, i.e. the deep dorsal and crural veins, is very frequent [12, 13]. This type of veno-occlusive dysfunction may respond to deep dorsal vein arterialization as suggested by Virag [14] or by a modified Hauri procedure, demonstrated in this issue by Hauri et al.

Finally, bad late results due to a multifacted problem of unexplained persistent venous drainage [15] may be improved in some cases by treatment of venous remnants [16] with a second operation or, more questionable, by retrograde venous sclerozation [17].

We believe that this issue of Urologia Internationalis reports a wide surgical experience of experts in surgery of veno-occlusive dysfunction, allowing a critical analysis of the present procedures, although knowing that it may only reflect the actual stage of error.

References

1 Levine FJ, Goldstein J: Reconstructive vascular surgery for impotence; in Jonas U, Thon WF, Stief CG (eds): Erectile Dysfunction. Berlin, Springer, 1991, pp 240–259.
2 Lowe MA, Schwartz AN, Berger RE: Controlled trial of infusion cavernosometry in impotent and potent man. J Urol 1991;146:783–785.
3 Wooten JS: Ligation of the dorsal vein of the penis as a cure for atonic impotence. Tex Med J 1902–1903;18:325–328.
4 Lowsley OS, Bray JL: The surgical relief of impotence. JAMA 1936;107:2029–2034.
5 Wespes E: Penile venous surgery for cavernovenous impotence. World J Urol 1990;8:97–100.
6 Lewis RW: Venous surgery for venous leakage. Int J Impotence Res 1990;2:1–19.
7 Lunglmayr G, Nachtigall M, Gindl K: Long-term results of deep dorsal penile vein transsection in venous impotence. Eur Urol 1988;15:209–212.
8 Luc TF: Penile venous surgery. Urol Clin North Am 1989;16:607–611.
9 Weidner W, Weiske WH, Rudnick J: 'Leakage'-Korrektur durch Resektion der vena dorsalis penis profunda. Urologe [A] 1989;28:217–222.
10 Bar-Moshé O, Vandendris M: Treatment of impotence due to perineal venous leakage by ligation of crura penis. J Urol 1988;139:1217–1219.
11 Gilbert P, Stief C: Spongiolysis: A new surgical treatment of impotence caused by distal venous leakage. J Urol 1987;138:784–786.
12 Fuchs AM, Mehringer CM, Rajfer J: Anatomy of penile venous drainage in potent and impotent men during cavernosography. J Urol 1989;141:1353–1356.
13 Rossman B, Mieza M, Melman R: Penile vein ligation for corporeal incompetence: An evaluation of short-term and long-term results. J Urol 1990;144:679–682.
14 Virag R: Revascularization of the penis; in Bennett AH (ed): Management of Male Impotence. Baltimore, Williams & Wilkins, 1982, pp 219–233.
15 Stief CG, Wetterauer U: Quantitative and qualitative analysis of dynamic cavernosographies in erectile dysfunction due to venous leakage. Urology 1989;34:252–257.
16 Kropman RF, Lycklama à Nijeholt AAB, Jansen FH, Kruyt RH: Results of repeated cavernography in ten patients without good clinical late results after partial resection of the deep dorsal penile vein. World J Urol 1990;8:101–103.
17 Müller SC, Schild H, Fritz T, Witzsch U: Percutaneous transpenile and retrograde venous occlusion for the treatment of venous leakage impotence. Eur Urol 1991;19:101–103.