J Urol. 1985 Aug;134(2):276-9.

Dynamic cavernosography: venous outflow studies of cavernous

bodies.

Porst H, Altwein JE, Bach D, Thon W.

**Abstract** 

Based on dynamic cavernosography studies in 15 patients, including 8 with simultaneous passive erection,

we present more precise details of the venous drainage of the penis. The venous drainage is comprised of 3

different systems. The superficial dorsal vein drains mainly the penile skin and prepuce, and empties via the

external pudendal veins into the femoral vein. The deep dorsal vein, located between the tunica albuginea

and Buck's fascia, drains the glans and all 3 corpora. The venae profundae penis emerge from each crus of

the corpora cavernosa and drain only the corpora themselves. Considerable individual differences were

found regarding further drainage via the pelvic venous system, including the prostatovesical plexus and

internal pudendal veins. Passive erection was tried in 11 patients and was successful immediately after

cavernosography in 8. The flow rates to induce an erection averaged 111 ml. per minute (range 55 to 160

ml. per minute), while the rate to maintain the erection was 48 ml. per minute (range 12 to 90 ml. per

minute).

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J Urol. 1991 Nov;146(5):1260-5.

Venous leaks: anatomical and physiological observations.

Shabsigh R, Fishman IJ, Toombs BD, Skolkin M.

Source

Scott Department of Urology, St. Luke's Episcopal Hospital, Houston, Texas.

**Abstract** 

A total of 50 patients with impotence underwent cavernosometry and cavernosography with intracavernous injection of vasoactive drugs. Several hemodynamic parameters were analyzed, including the pressure response curve after injection of vasoactive drugs and infusion of saline, the volume required to achieve erection, venous outflow resistance, erection maintenance infusion rate, rate of pressure decrease after discontinuation of infusion and post-infusion steady state pressure. On the basis of cavernosometric findings, venous leakage was ruled out in 4 patients. In the remaining 46 patients leak sites visualized during cavernosography included superficial dorsal vein in 1 (2.2%), deep dorsal vein in all 46 (100%), cavernous veins in 32 (69.6%), glans in 19 (41.3%) and corpus spongiosum in 14 (30.4%). Aberrant veins were documented in 7 patients (15.2%) communicating with the saphenous vein in 4 (8.9%), scrotal veins in 2 (4.4%) and femoral veins in 1 (2.2%). Eight patients (17.4%) had leakage through the deep dorsal vein as the only venous site, 17 (36.9%) had leakage through 2 venous sites, 14 (30.4%) had leakage through 3 venous sites and 7 (15.2%) had leakage through 4 venous sites. Correlations among hemodynamic and radiographic observations allowed the identification of 4 different types of cavernosometric findings. While type I represented normal penile vascular findings, types III and IV represented venous leakage. Type II could represent no leak, a mild leak or an undetected arterial problem. Accuracy of interpretation of a study may be improved by taking more than 1 parameter into consideration, including erection maintenance infusion rate, intracavernous pressure decrease within the first 5 seconds after discontinuation of infusion and the final steady state intracavernous pressure. The majority of patients have more than 1 leak site (82.6%). The most commonly combined sites of leakage are the deep dorsal and cavernous veins.

Comment in

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Acta Biomed Ateneo Parmense. 1995;66(6):223-8.

[Venous leakage impotence: anatomical and physiological considerations upon gravity cavernosometry and radio-fluorographic cavernosography].

[Article in Italian]

Arena F, Peracchia G, Passari A, Ferrozzi F, Cortellini P.

## Source

Divisione di Urologia, Azienda Ospedaliera di Parma.

## **Abstract**

We performed gravity cavernosometry and radio-fluoro-graphic cavernosography with pharmacological intracavernous injection in 15 patients with erectile dysfunction. On the basis of cavernosographyc findings, in the 15 patients leak sites visualized included deep dorsal vein in all 15 patients leak sites visualized included deep dorsal vein in all 15 patients (100%), cavernous veins in 7 (46.6%), glans in 4 (26.6%) and corpus spongiosum in 3 (20%). Aberrant veins documented in 4 patients (26.6%): communicating with the saphenous vein in 2 (13.3%), with scrotal veins and femoral vein in 1 (6.6%). Deep dorsal vein leakage as the only venous site was find in 2 patients (13.3%), 9 (60%) had leakage through 2 venous sites, 3 (20%) had leakage through 3 venous sites and 1 (6.6%) had leakage through 4 venous sites. Correlations among hemodynamic and radiographic observations allowed the identification of 2 types of cavernosometric findings. While type I developed a high intracavernous pressure during gravity infusion, an high intracavernous pressure was not observed in type 2. The FCG by the digital radio-fluoro-graphic digital system permit the possibility of sottraction and rielaboration of images and reduces examination and radiation time. The gravity FCM is simple, not expensive and respect the physiological intracavernous pressure.

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