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**Introduction & Objectives:** The aim of this work was to verify the value of CT-Cavernosography for penile venous leak diagnosis. Based on the findings and our recent work, we wanted to enhance our 3D mathematical model of penile function and guide current understanding of venous leakage to a more physics based platform, rather than old hypothesis. Furthermore, we evaluated the effectiveness of pelvic vein embolisation with aethoxysclerol in aero-block technique for the treatment of impotence due to venous leakage in men using sildenafil for intercourse. The aim of this procedure was to reduce or eliminate the use of sildenafil.

**Materials & Methods:** A total of 49 patients with veno-occlusive dysfunction, severe enough for the need of PDE5 inhibitors for vaginal penetration, underwent pelvic venoablation with aethoxysclerol. The mean patient age was 53.5 years. Venous leaks were identified by Color Doppler Ultrasound and CT Cavernosography after intracavernous alprostadil injection. Under local anesthesia a 5F-Angioport was inserted antegrade into the deep dorsal penile vein. The pelvic venogram obtained with deep dorsal venography was included. Aethoxysclerol 3% as sclerosing agent was injected after air-block under valsalva manoeuvre in three consecutive steps. A 5F-angiography catheter was placed in the vein of major outflow from the penis. Success was defined as the ability to achieve vaginal insertion without the aid of any drugs, vasoactive injections, penile prosthesis, or vacuum device. Additionally, a pre- and posttherapeutical IIEF-5 score was performed.

**Results:** At a 12 month follow-up 40 out of 49 patients (81.63%) reported to have erections sufficient for vaginal insertion without the use of any drug or additional device. 4 (8.16%) patients did not report any betterment. Mean IIEF-Score and IIEF-Score-Differences after Intervention see Figure 1 and 2. Follow up Color Doppler Ultrasound revealed a new or persistent venous leakage in 8 (16.33%) of the patients. No serious complications occurred.

**Conclusions:** Our new pelvic venoablation technique using aethoxysclerol in air-block technique was effective, minimally invasive, and cost-effective. All patients were able to perform sexual intercourse without the previously used dosage of their PDE5 inhibitor. This new method may help in patients with contra-indications against PDE5 inhibitors, in patients who can not afford the frequent usage of expansive oral medication or those who do not fully response to PDE5-inhibitors.