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### CAN AN EXTERNAL PENIS STRETCHER REDUCE PEYRONIE'S PENILE CURVATURE?

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**Introduction & Objectives:** Peyronie's fibrotic lesions frequently affect the dorsal tunica albuginea and the septum of the penis. Subsequently they can lead to plaque development, penile deformity and pain during erection. Duplex sonographic scanning may allow an objective evaluation of the fibrosis, assessing the thickening of the tunica albuginea and penile plaques. The aim of this study is to investigate the efficacy of mechanical penile stretching (PS) to reduce plaque thickness and penile deformity during erection.

**Materials & Methods:** Eight patients (age 58.5/5.3 yrs.) affected by Peyronie's disease, apparently unmodified at least for the latest 3 months and causing penile curvature during erection (PEC), were trained to use a mechanical penis stretcher. None of them complained about erectile dysfunction according to IIEF test, and penile pain. After intracavernous injection of PgE1 5-15 g to obtain full erection (assessed by both Digital Inflection Rigidometry and palpation), cross scanning of tunica albuginea by duplex sonography, photographs of the erect penis according to Kelami's projections, and penile diameters and length measurements were performed before and after daily home PS application (at least four hours / day) for 3 to 6 months. Individual follow-up examinations were scheduled after 3 and 6 months. At the present time, all patients have concluded the 3-month follow-up and two of them the 6-month one.

**Results:** The tunica highest thickness resulted 1.8±0.6 mm before and 1.6±0.3 mm after PS (n.s.). The septum latero-lateral maximum thickness was 2.2±0.7 mm before and 1.8±0.8 mm after PS (n.s.). Penile length, dorsally measured from penopubic angle to meatus, was 100.5±27.3 mm before and 104.6±22.2 mm after PS (n.s.). Photographs showed that PEC decreased from 34.1±4.9° before to 20.0±12.2° after PS (p<0.05). The treatment was well tolerated (no severe complication and no drop out occurred).

**Conclusions:** These results suggest a promising use of PS in selected Peyronie's patients affected by penile curvature without erectile dysfunction.

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### COMPLETE PENILE DISASSEMBLING AND TUNICA ALBUGINEA AUTOGRAFT IN THE TREATMENT OF SEVERE PENILE DEFORMITIES DUE TO LA PEYRONIE'S DISEASE.

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In this video we present a complex, but in our opinion safe technique, that satisfies the principles of a perfect exposure, a minimal iatrogenic injury and a theoretically ideal graft.

**Material and Method:** We have treated up to now 10 patients (45 to 62 yrs old) affected by severe curvature of the penis due retracting IPP plaque localised in the dorsal and distal part of the tunica albuginea. In all the cases the erection was not significantly impaired. The operation started in lithotomy position and two patches of tunica albuginea were harvested from each of the crural extensions of the corpora. The resulting gap was closed directly by suture without any problem and the

perineotomy was closed. A standard penile subcoronal approach with cutaneous scalp fully exposed the distal part of the corpora. The fascia penis is bilaterally incised paraurethraly starting just below the glans. Dissection begins ventrally separating the corpus spongiosum from the ventral albuginea and goes on distally, always following this plane, until the glans is completely freed from the corporeal apices on one side and from the intact dorsal neurovascular bundle on the other side. The corpora can then be fully exposed, the plaque(s) are excised or better widely incised and the autologous patches of tunica albuginea are inserted in the resulting defects by sutures, after having done relaxing incisions on the margins of the corporeal defect. The glans is then carefully repositioned and the fascial incisions closed. Postectomy is performed as usual and standard dressing is applied.

**Results:** We did not observe significant post-operative complications. All the patients were discharged from the hospital between the 3rd and the 7th post-operative day. After 1 month the patients underwent an echo-colour Doppler examination of the penis that did not reveal injuries to the dorsal and or central penile arteries. The sensibility seemed to be much better than in cases undergone to conventional dissection. The penis was straightened every case and all of the patients could have sexual intercourse after a period variable from 45 to 90 days from the operation. We did not observe any complication or inconvenient linked to crural harvesting.

**Discussion** Complete penile disassembly allows the best exposure of the apex of the corpora and in our opinion the most atraumatic neuro-vascular bundle dissection and there should be no doubt that tunica albuginea autograft represents the most suitable material for replacing tunica albuginea. The disease affects rarely if ever the crura and the harvesting of a patch does not seem to impair penis function nor stability.

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### ONE YEAR EXPERIENCE WITH S.I.S. BIOMATERIAL IN PENILE PATCH SURGERY

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**OBJECTIVE** of the study is to evaluate the possible role of the new biomaterial S.I.S. in reconstructive penile surgery.

**MATERIAL AND METHODS:** S.I.S. is a natural, acellular collagen matrix constructed from porcine Small Intestinal Submucosa. This biomaterial provides a scaffold suited for tissue repair when surgically implanted in different organs. From October 2000 S.I.S. is routinely used in penile reconstructive surgery at our institution. 33 patients have received S.I.S. graft for different indications. 21 patients had grafting for Peyronie's disease. In 6 cases S.I.S. was used for penile lengthening and augmentation surgery. In 5 cases a penile implant and S.I.S. grafting were used together to lengthen a fibrotic short penis. One penile traumatic rupture was successfully treated with S.I.S. graft.

**RESULTS** are evaluated with clinical criteria and with echocolor imaging of implanted graft with a maximum follow-up of 9 months. S.I.S. is a good and usable biomaterial for penile grafting: consistent in thickness, strength and pliability while sutured will not lead to encapsulation. Echocolor study reveals a rapid inosculation of S.I.S., minor fibrosis and gradually remodeled leaving behind natural tissue. Complete