Conclusions: These observations suggest that sex hormones modulate the vaginal hemodynamics associated with genital sexual arousal. VIP-mediated increase in genital blood flow appears to be hormone dependent. We suggest that genital blood flow may depend on sex steroid hormonal status and any imbalance may contribute to genital arousal dysfunction.

13:30 – 15:30 **Moderated Posters 1**

Chairmen: **D Ralph** (UK), **M Sohn** (Germany)

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LONG TERM RESULTS OF PENILE PROSTHESIS INSERTION FOR TREATMENT OF ERECTILE DYSFUNCTION: OUR EXPERIENCE WITH 447 PATIENTS

Minervini A., Suks M., Rees R., Goorney S., Bettocchi C., Ralph D.J., Pryor J.P. (U.K.)

Objective: To evaluate the long-term results of penile prosthesis surgery performed at one institution comparing satisfaction rates with different type of prosthesis.

Materials and Methods: We review the notes of 447 men who had 504 penile prosthesis implanted between August 1975 and December 2000. The mean follow-up was 50 months (range 1-297) and included a questionnaire or telephone call.

Results: Patients mean age was 52 years (range 21-78) with 404 being primary implants and 43 having had a previous failed implantation elsewhere. Types of prosthesis inserted: 3-piece inflatable device (81), inflatable self-contained device (30), malleable prosthesis (393). Twenty-two patients were lost to follow up and 26 (5,8%) had their prosthesis removed and not replaced. Of the remaining 399 patients, 377 (94,5%) were having sexual intercourse and 338 (84,7%) were satisfied with the outcome. Specific satisfaction rates of different type of prosthesis were as follow: Mentor 3-piece inflatable, 86% (24 patients, mean follow up 32 months, range 1-144 months); AMS 3-piece inflatable, 81% (34 patients, mean 39 months, range 1-142); Mentor malleable, 88% (206 patients, mean 55 months, range 1-199); AMS malleable, 89% (40 patients, mean 59 months, range 1-168) and Small Carrion, 75% (70 patients, 46 months, range 1-297). Overall, the AMS self contained prosthesis were inserted in 25 patients of whom 5 have their prosthesis replaced with a different type and 4 have their prosthesis removed and not replaced. The satisfaction rate of the remained sixteen patients was 81% (mean 46 months, range 1-150).

Conclusion: The majority of patients (84,7%) are extremely satisfied with penile prosthetic surgery. Satisfaction rates with different types of prosthesis are very similar and very high with the exception of Small Carrion prosthesis.

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SILDENAFIL CITRATE AS A TREATMENT FOR COLD GLANS SYNDROME AFTER IMPLANTATION OF PENILE PROSTHESIS

Lledo-Garcia E., Moncada-Iribarren I., Jara-Rascon J., Gonzalez-Chamorro F., Hernandez-Fernandez C., Llorente-Abarca C. (Spain)

INTRODUCTION and OBJECTIVE. Some patients with functioning penile prosthesis (PP) refer a degree of disatisfaction during sexual intercourse (SI) due to insufficient engorgement and temperature of the glans (cold glans syndrome: CGS). Our aim was to evaluate the effect of sildenafil on the response of glans penis during SI in patients with penile prosthesis who refer CGS symptoms.

MATERIAL AND METHODS. Fourteen patients who had undergone three-piece flatable penile prosthesis implantation were evaluated. In spite of the normal functioning of the device all of them referred a degree of disatisfaction during SI. Even though stiffness was achieved on activating the prosthesis, all of them felt a lack of engorgement and temperature in the glans penis. The patients were adviced to have a dose of 100 mg vo sildenafil about 45 minutes before activating the PP and starting SI. All of them followed this scheme at least three times. They ticked questions 7, 8, 13 and 14 of the International Index of Erectile Function (IIEF) questionaire with/without having had sildenafil. They also underwent a RigiScan test for penile tip rigidity register both with inflated prosthesis and sexual stimulation without having had sildenafil and after a 100 mg vo dose of sildenafil.

RESULTS. 12 out of 14 patients (85%) referred more pleasant SI on sildenafil. It was related with an increase in penile glans engorgement and sensitivity. The scores obtained in the IIEF questions showed a significant variation (table). Average rigidity tip value also showed a significant variation (with/without sildenafil: 53% / 78%, $p<0.05$). Sildenafil-related morbidity was not found. IIEF question No.

Sildenafil -Sildenafil +P 7+859<0.05 13+14 7 10<0.05

CONCLUSIONS. Sildenafil may be used to improve functional results of the PP in those patients with CGS and increases satisfaction during SI.

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THE LEARNING CURVE IN PENILE PROSTHESIS SURGERY: THE ROLE OF "CENTERS OF EXCELLENCE" FOR PROSTHESIS IMPLANTATION.

Moncada I., Martin-Morales A., Jara J., Bonilla, R., Subira, D., Hernandez C., Wilson S. K. (USA)

INTRODUCTION and OBJECTIVES. The validity of penile prosthesis implantation has been periodically questioned. Some follow-up studies reveal poor results in terms of patient-partner dissatisfaction, or infection rates whereas other studies reveal a high index of satisfaction and a very good survival of the prosthesis. The objective of this study was to evaluate the impact of the learning curve in two Spanish centers.

METHODS. A retrospective clinical record review was conducted to study a variety of items including outcome, morbidity, need of re-operation and a questionnaire to assess patient and partner satisfaction. The period of study was from

1987 to 2000 and a total of 306 patients were implanted. Two groups were made, one from 1987 to 1994 (8 years-43 patients) and a second from 1995 to 2000 (6 years, 263 patients). This date (1994) corresponded with the visit of a renowned expert in this kind of surgery (SKW) who served as an advisor and consultant during the rest of the period.
RESULTS. Important differences were found between both groups: infection and extrusion rates were significantly higher in the first group (6.2% vs. 2.1%), need for surgery for mechanical failure or any other reason was also statistically different (24% vs. 13%) between groups. On the other hand, questionnaires revealed a higher satisfaction rates in the second group (87% vs. 76%) with an 87% of the patients who would have the prosthesis again versus 72% of the first group.
CONCLUSIONS: There is an important learning curve for penile prosthesis implantation surgery. Expertise and focusing are of paramount importance in this regard. Having in mind that implantation surgery should be offered to a large number of patients, the promotion of "centers of excellence" for prosthesis implantation will improve the results of this difficult surgery. The presence of an advisor internationally recognized is of great help.

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INSERTION OF PENILE PROSTHESIS IN FIBROTIC CORPORA

Mooreville M., Delk J.R., Wilson S.K. (USA)

Introduction and Objectives: There are no more difficult cases in prosthetic urology than patients with corporeal fibrosis. Various techniques have been developped to handle these difficult situations which include: surgical incisions which avoid previously scarred areas, special corporotomies which require "priming" of the opening toallow the insertion of special dilators like the Mooreville cutting dilator or the Carrion-Rossello cavernotome, and rarely synthetic grafts which are used to cover the implant. Specialized prosthesis like the AMS 700 CXM and the Mentor Alpha NB cylinders along with these dedicated tools created to develop the fibrotic corpora have made the use of grafts almost non-existant. This poster reviews the techniques mentioned.
Methods: We have used these techniques in 71 patients with corporeal fibrosis of various etiologies. The most common cause is the removal of previously implanted prosthesis. The surgical technique includes the high transverse scrotal incision for excellent proximal exposure, incising the corpora and making cruciate incisions proximally and distally ("priming") to allow for the insertion of our preferred tool the Mooreville cutting dilator (the Carrion-Rossello also works well). Dilating by both incisional cutting as well as rotational "shaving" of fibrotic tissue and finally the fitting of the smaller prosthesis tailored for these difficult situations. Internal cutting of the fibrosis obviates extensive corporotomies and results in quicker procedures.
Results: In our cases these techniques resulted in successful implantation of inflatable cylinders or semimalleable rods without urethral injury or lateral corporeal perforation. When perforation occurs (7 cases), it is the result of passing the thinnest dilator (6 mm) into compromised corpora. Currently we avoid this problem by dilating under vision through a secondary incision if needed.

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CIGARETTE SMOKING AS RISK FACTOR FOR PEYRONIE'S DISEASE.

La Pera G., Pescatori E., Boffini A., Calabrese M., Andriani E., Natali A., Vaggi L., Colombo F., Catuogno C., Campo F., Giustini M., Taggi F. (Italy)

In this population-based study we have recruited all men between 50 and 69 years from 10 GP lists throughout Italy. The subjects have been fully investigated on the general health, smoking habits and on the other known risk factors. The IIEF, IPSS, premature ejaculation and Peyronies disease questionnaires were given to all subjects by a trained uro-andrologist.
Materials and methods. 647 out of 1180 contacted men have been recruited. The univariate and multivariate analysis has been performed with the following variables: Peyronie's disease, IPSS symptom score, erectile dysfunction, sexual desire, premature ejaculation, systemic diseases, drugs, alcohol and smoke habits, and age.
Result: The multivariate analysis showed a significant correlation between cigarette smoking and Peyronie's disease, with an O.R. of 4.6 (95% C.L. 1.506 – 14.287). Smoking as single variable had an O.R. of 7.2 (95% C.L. 2.34 –24.93). This risk increases with the number of packets smoked over the years. No significant association was observed between Peyronie's disease and the other variables such as cardiovascular diseases, diabetes, hypertension, and alcohol consumption.
Conclusions: According to our results, cigarette smoking may be considered a risk factor for developing Peyronie's disease. If further and more targeted studies confirm that giving up smoking may reduce the risk of developing Peyronie's disease, then there will be new scenarios for primary, secondary prevention and for curbing the progression of this disease.

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EFFICACY OF ANAPSOS ON PEYRONIE'S DISEASE TREATMENT

Segura Panos A., De la Sen M., Ramirez A., Sempere J.M., Munoz C., Pelluch A., Lobado J.J., Sanchez M., Torrus P., Chillon S., Marco F. (Spain)

Introduction: Anapsos is an immunomodulating phyto-drug used in the treatment of inflammatory and/or autoimmune diseases. Tamoxifen is sometimes used to treat La Peyronie's disease (PD), due to its role on the immunoinflammatory response.
Objectives: To assess the efficacy of Anapsos in the treatment of PD, evaluating its action on the most relevant clinical and immunological parameters
Patients and Methods: Thirty-four patients randomly assigned to: group A- (19 treated with Anapsos (Armaya Fuerte„¥) and group T- (15 treated with Tamoxifen (Nolvadex 20„¥) were studied for 6 months. Age and complaints were similar in both groups. Time of evolution in A was 31.8 „b 29.9 months, while in T was 9.6 „b 5.7. All patients underwent clinical and laboratory tests pre and post-treatment. The plaque was assessed by physical examination and penis echography. Penis incurvation, by self-photograph or I.C. injection. The two remaining parameters (pain and coitus difficulties) by visual

analogical scale. Adhesion molecules (CD11b,CD18,CD29) and other lymphocyte markers (CD4,CD8,CD4/CD45RA, CD4/CD29),by flow cytometry. Cytokines (TGF-ƒÒ and IL-10) by ELISA in cell supernatant cultures. Statistical analysis was performed by SPSS software. After the question: Are you satisfied with the treatment? A= 66.7% and T= 45% patients answered ¡§Yesj¨. A 22% post-treatment decrease in TGF-ƒÒ was found in A when compared with initial values, against 5% in T. IL-10 diminished 17% in A against 79% in T. CD4/CD45RA increased 20% in both groups.
Conclusions: Clinical improvement was better in group A. An increase on TGF-ƒÒ expression in the albugineous cells of PD patients has been described, which correlates with the fibrosis degree. The TGF-ƒÒ decrease observed after A treatment shows a possible fibrosis regulating effect. CD4/CD45RA lymphocyte subset has been defined as playing a suppressor inducer role. The increase observed after A and T treatment, could help to stop the autoimmune PD response. Although Anapsos seeems to be helpful in PD treatment, these results must be considered preliminar.

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EARLY REHABILITATION WITH VACUUM DEVICE AFTER PLAQUE SURGERY AND SAPHENOUS GRAFTS IN THE SURGICAL TREATMENT OF PEYRONIE'S DISEASE

Colombo F., Nicola M., Austoni E. (Italy)

Introduction and objectives: The main limit of the use of saphena grafting consists of the poor extendibility of the penis following the procedure. With the aim of increasing the elasticity of the graft and thus improving the extendibility of the penis during erection, our patients underwent early and intensive post-operative rehabilitation with a Vacuum device.
Material and methods: Between January 1999 and June 2000, 14 patients who had undergone surgery with multiple plaque incisions and covering grafts with segments of the saphema and 9 patients treated with total excision of the plaque and reconstruction with saphena vein patchwork were instructed to apply a vacuum device twice a day every day for 20 minutes running, without using the band at the root. They were to start from post-operative day 21 and to continue for three months. Low-dosage cortisone treatment (5 mg/die) was associated with this therapy. Measurement of the length of the penis were carried out on post-operative day 21 and repeated after three months of treatment with the vacuum device.
Results: All 14 patients treated with multiple incisions and vein grafts complained for a retracted penis almost impossible to extend during erection. After daily application of the vacuum device for three months, it was possible to note a lengthening of the erected penis in 12 of the 14 patients as compared with the check carried out on post-operative day 21, varying from 0.5 cm to 3 cm (mean: 1.8). In the group of 9 patients who had undergone total plaque excision and saphena patchwork, the post-operative hypoelasticity was less marked. At three-month follow-up, lengthening of the penis was shown in 6 patients, and varied from a minimum of 0.5 cm to a maximum of 2 cm (mean: 1).
Conclusions: Use of the Vacuum device is an excellent solution for preventing retraction of the saphena vein graft following surgery for Peyronie's disease. It is effective, entails no complications and is readily accepted by the patients and by their partners.

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CORPOROPLASTY USING TUNICA ALBUGINEA FREE GRAFTS FOR PENILE DEFORMITIES: LONG TERM RESULTS

Hatzichristou D., Hatzimouratidis K., Tzortzis V., Apostolidis A., Ioannides E., Yannakoyorgos K. (Greece)

Introduction and objectives: Nesbit's and plication procedures for penile deformities are associated with penile shortening, specifically in patients with excessive curvature and/or rotation. Grafting procedures on the other hand, are associated with poor long-term postoperative results, due to graft shrinkage and veno-occlusive dysfunction. In order to minimize penile shortening and to preserve potency, we had previously described a corporoplasty using tunica albuginea free grafting. In the present study, we report on long-term results of the method.
Methods: Seventeen potent patients (19-62 years, mean 55+1.4) with excessive penile deformities (4 congenital, 13 Peyronie's disease) have been treated at our department, using our technique: opposite to the point of maximum curvature, a typical Nesbit's procedure was performed. The excised tunica albuginea segment(s) was preserved to be used as a free graft. A symmetrical incision was made at the opposite site and the elliptical tunical graft was placed on the defect. Further elliptical excisions and grafting followed as needed to correct the deformity. Penile ultrasonography at 6 months used to detect tunica grafting abnormalities. Annual follow-up included physical examination and a questionnaire to evaluate patient satisfaction.
Results: With a follow-up of 18-62 months (mean 40+31.1) penile straightening and potency remained in all patients but one, who had a disease progression 2 years postoperatively. Ultrasonography of the corpora cavernosa revealed no changes on the ultrastructure of the grafts. 8/17 patients recognized penile shortening; all patients however responded positive to the questions regarding satisfaction, recommendation of the procedure to a friend and willingness of redo in case of disease progression.
Conclusions: The proposed technique is simple and safe, eliminating the shortening of the penile shaft by 50%, compared to the Nesbit's procedure. Long-term results proved that tunica albuginea is the ideal grafting material, as its unique properties prevent graft scarring and post-operative erectile dysfunction.
Support: noneCategory: Peyronie's disease.

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

Scroppo F., Mancini M., Maggi M., Colpi G.M. (Italy)

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.

Carmignani G., Corbu C., De Rose A., Traverso P. (Italy)

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 to due retracting IPP plaque localised in the dorsal and distal parto 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 paraurethrally 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. Tha 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 form 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 disassemblyallows the best exposure of the apex of the corpora and in our opinion the most atraumatic neuro-vascular bundle dissection and there shouldbe 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

Paradiso M., Sedigh O., Volpe A., Milan G.L. (Italy)

OBJECTIVE of the study is to evaluate the possibile 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 biomatherial 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

histologic transformation process require more than 6 months, but less time than other autologous and eterologous biomatherials commonly used in this kind of surgery.
CONCLUSION: S.I.S. is good substitute for others autologous and eterologous biomatherials (vein and dermal graft) used as tissue replacement in penile reconstructive surgery.

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IS REAL PENILE LENGTHENING POSSIBLE BY SIMPLE LIGAMENTOLYSIS?

Basting R., Perovic S., Djordjevic M, Djakovic N. (Germany, Yugoslavia)

Aim: Is it possible to lengthen the flaccid and erect penis by simplydeviding the fusiform and suspensory ligament?
Method: Between Jan 1997 and Jan 2000 46 patients (age 19-58) were operatedfor cosmetic reasons (mostly Hypospadic and Peyronie cripples). Preopmeasurement in flaccid state was 5.8cm+/-2.6cm and in PGE-induced erectstate 14.8cm+/-2.8cm. The ligamentolysis was performed in 38 patients viaz-shaped incision in the mons pubis region -the others via a combinedsubcoronal-penoscrotal incision. After the classical ligamentolysis the resulting space below the symphysis was filled with fatty tissue to preventreadaptation of the ligaments.
Results: Penile length was measured 12 months postop pre and after PGE injection. Optical penile lengthening resulted in flaccid state by 2,1cm+/-1.4cm, in erectile state 0.9cm+/-0,4cm - the lengthening result was the same in either approach but the cosmetical result is much preferableusing the combined subcoronal-penoscrotal approach. Due to the hanging penis in erect state (as result of the ligamentolysis) the resulting lengthening is psychologically not percepted as an improvement.
Summary: The sole ligamentolysis is by no means a sufficient procedure for real penile lengthening - suprapubic z-plasty is not an adequate approachand may even result in cosmetically sad appearance - if the patients demand the procedure we routinely have them invetigated by a psychiatrist preop in order to prevent the illusion of a penile lengthening that is not possiblein the erect state.

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ENHANCEMENT PHALLOPLASTY BY ALBUGINEA-SAPHENOUS GRAFTS: A THREE-YEAR EXPERIENCE

Austoni E., Guarneri A., Cazzaniga A., Colombo F. (Italy)

Objectives Since 1995 we have been using an original technique that enables penile enlargement to be achieved by means of enhancement surgery on the corporal albuginea. We now are able to report the long-term results of our case-load.
Methods: Between 1995 and 1997, 39 patients who wished to increase their penile diameter under-went enlargement phalloplasty with bilateral saphenous grafts. Patients considered eligible for surgery were either patients with penile hypoplasia (reconstructive surgery) or functional penile dysmorphophobia (cosmetic surgery). The average pre-operative penile diameter in a flaccid state and during erection was found to be 2.1 cm (1.6–2.7 cm) and 2.9 cm (2.2–3.7) respectively. Before surgery the patients were informed of the experimental nature of the surgical procedure, of the possible complications. The increase in volume of the corpora cavernosa was achieved by placing saphenous grafts into bilateral longitudinal openings in the albuginea along the whole length of the penis. A clinical check-up was car-ried out 9 months after surgery. Telephone interviews were used for the two-year follow up.
Results: The average post-operative diameter of the flaccid penis was found to be 2.3 cm (1.7–2.9 cm), with a statistically significant difference ($p < 0.01$). The average diameter observed during erection was 4.2 cm (3.4– 4.9) with an increase varying between 11 and 21 mm ($p < 0.01$). None of the patients reported erectile dysfunctions or alterations of the sensitivity of the penis. At the time of the telephone interview, all the patients contacted (28) stated that the outcome of the procedure was excellent, both aesthetically and functionally.
Conclusions: The penile enlargement phalloplasty technique with saphenous grafting onto the albuginea definitely achieves an increase in the diameter of the penis. In our series, this technique was found to entail no aesthetic or functional complications.

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GRAFT COMPARISON IN THE RADICAL SURGERY OF PEYRONIE'S DISEASE

Gulino G., Gentile G., Falabella R., Sasso F. (Italy)

Surgical results coming from the use of different graft has been compared in this prospectic study. 37pts (mean age54) with severe Peyronie's disease (curvature>40degree) with or without penile disease and with normal erectile function have been enrolled in the present study. All of them underwent radical surgical plaque removal with previous isolation of the penile neurovascular bundle. Different materials have been used as a graft: in 28 patients acellular human derma (Alloderm), saphena vein reconfigured in a rectangular shape in 6 patients, bovine pericardium in 1 patient, human liophylized pericardium in last consecutive two patients. All the grafts have been fixed to the albuginea with running absorbable sutures. Six and 12 mounths after the operation, the penile bending was succesfully corrected in 5/6 patients with saphena, 20/24 patients whit Alloderm in 2/2 treated wuth human pericardium, and was not resolved in the pts with bovine pericardium. Penile fibrosis with mean shortening of 2 cm was recorded in 2/24 cases treated with Alloderm and in all the patients treated with bovine pericardium. Four of 24 patients belonging to the Alloderm group reported a loss of the quality of erection, that was cured with oral sildenafil. Mean operation times was 210 min in case of use of saphena, 150 min in the groups of Alloderm and pericardium. None of the used graft can be considered as a "gold standard". Nonetheless the Alloderm has shown clear advantages as short operating time and good long term elasticity. Saphena vein demonstrated excellent long term elasticity and biocompatibility, but more complex and prolonged operating procedure as well as a small area graft available, so that it should be considered as a first choice in case of replacement after plaque incision.

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PLAQUE INCISION AND VEIN PATCHING (THE LUE PROCEDURE) FOR PEYRONIE'S DISEASE.

Goorney S., Adeniyi, Rees R., Kell, Pryor J. (U.K.)

INTRODUCTION This paper assesses the long-term outcome of the Lue procedure to correct the penile deformity due to Peyronie's disease with minimal penile shortening.
METHOD Fifty-one patients (mean age 49yrs, range 18-68) with Peyronie's disease (mean duration 15mths) underwent the Lue procedure involving plaque incision and vein grafting. The degree of curvature varied from 20°-90° (mean 65°), with the plaque located dorsally N=37), circumferentially (N=5), dorsolateral (N=5) and laterally (n=4). The graft was taken from the long saphenous vein either at the ankle or more recently from the groin, in 3 patients from the deep dorsal vein. This was used as either a single (N=36) or double graft (N=15). Any residual intra operative curvature was corrected by additional plication sutures (N=14). Circumcision was performed routinely except in 5 patients, who refused. The mean postoperative follow up was 1yr (2-48mths).
RESULTS: The penis was straight or residual curvature <10° in 41 patients (80%), 10 patients noticed shortening. Four patients (10°) developed postoperative erectile dysfunction, although the pre operative erectile dysfunction in 14 patients persisted post operatively, 1 patient eventually had a penile prosthesis inserted. The postoperative complications included glans numbness (N=2), haematoma (N=1), painful penile sutures (N=3) and groin wound haematoma (N=1). Three of the 5 patients who refused circumcision underwent an emergency circumcision for paraphimosis.
CONCLUSION: The Lue procedure is an effective treatment in the surgical management of Peyronie's disease. Postoperative shortening however remains a risk though the occurrence is less frequent than with the Nesbit procedure.

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RESULTS AND COMPLICATIONS OF PENILE RECONSTRUCTION WITH MICROSURGICALLY TRANSPLANTED FOREARM FREE FLAPS

Sohn M., Jakse G., Peek A., Exner K. (Germany)

OBJECTIVES: Worldwide penile and urethral reconstruction in transsexuals, intersexuals and after traumatic penile loss is mostly performed by forearm free-flap transfer.
MATERIAL & METHODS: From 1990-2000 60 forearm free-flaps were used for penile reconstruction in cooperation between plastic surgeons and urologists at our institutions. 52 patients were female-to-male transsexuals, the remaining 8 patients were intersexuals and patients with traumatic or congenital loss of the penis. In all cases genital reconstruction was scheduled as a one-session procedure. In the last 10 patients urethral preconstruction in situ preceded the definite operation. Prosthetic devices were implanted more than six months after penile reconstruction in two separate sessions.
RESULTS: In one case complete flap loss occurred due to recurrent microvascular thrombosis. Compartment syndromes and nerve lesions due to the extended lithotomy position were seen in three cases. Postoperative urethral fistulae and stenoses were frequent and resulted in overall 115 operative procedures, whereas further 70 procedures were necessary for complete prosthetic implantation.
CONCLUSIONS: Penile reconstruction with free fore-arm flaps remains a promising approach with good functional and esthetic results. Urethal problems are frequent and demand further research.

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MALE-TO-FEMALE SEX REASSSIGNMENT SURGERY (SRS): TECHNIQUE AND FUNCTIONAL OUTCOMES

Trombetta C., Liguori G., Buttazzi L., Bucci S., Belgrano E. (Italy)

Objectives: Although operative treatment of male transsexual is becoming more common, few follow-up studies have been reported in Literature.
Methods: Between December 1994 and December 2000, 42 male transsexuals underwent male-to-female SRS. Patients were at least 21 years old (mean age 31, range 21-59. To create the neovagina, inverted penile skin vaginoplasty has been used in the first 9 patients, in the other cases penile and scrotal skin inversion technique has been adopted. An inflatable silicon vaginal tutor was introduced in the vaginal cavity and was maintained all day long for 30 days and during the night for 3 months.
Results: Mean follow-up is 32 months (range 4-72). 2 patient showed partial necrosis of the scrotal flap; in another one there was a minimal bleeding from the neoclitoris that was treated surgically. In the long term, neomeatus stricture occurred in 6 patients and was treated with meatotomy. 2 patient developed stenosis of the neovagina, one after 3 years and the other after 1 year. Hematoma of the labia majora of the neovagina occurred in 1 case that resolved spontaneously. One patient developed a right leg muscular contusion. 17 patients have been evaluated by a questionnaire after 12 months: physical and functional results of surgery were judged to be excellent and 95% of patients had orgasm. Pallesthesic sensation of genitalia has been evaluated by means of biothesiometry: all patients had a good sensation to vibration.
Conclusions: In order to avoid stenosis of the neovagina it is very important to use the vaginal tutor regularly after the intervention. It is extremely important to shorten the urethra as much as possible to avoid painful swelling during intercourse and to spathulate the neomeatus in order to prevent strictures.

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ONE-STAGE SEX REASSIGNEMENT SURGERY IN FEMALE-TO-MALE TRANSSEXUALS

Trombetta C., Liguori G., Buttazzi L., Bucci S., Pascone M., Belgrano E.
(Italy)

Objectives: Herein we report a case of a young female-to-male transsexual in which mastectomy and chest contouring were carried out with oophorectomy and hysterectomy at the same time as the phalloplasty according to Pryor technique.
Methods: A 24-year-old woman is diagnosed as transsexual and submitted to sex-reassignement surgery. Two operative teams are necessary. While the first team performs mastectomy and

chest contouring, hysteroophorectomy and phalloplasty are carried out by the second team. The phallus is fashioned from a flap of anterior abdominal wall skin, 10 cm in width and 11 cm in length measured from the base of the clitoris. Superficial inferior epigastric and external pudendal vessels are incorporated into the flap pedicle. Through the same incision, hysteroophorectomy can be easily performed. Hypogastric incision is laterally prolonged, and, after the umbelicus is incised and closed with separate stitches, abdominal skin and subcutaneous fat are widely dissected from the abdominal fascia. The donor area may be closed in a tension free manner. The flap is then tunnelled towards the abdomen through the base of the abdominal flap. The neourethra is not created because the patient does not wish to have the neourethra fashioned. The phallus is fashioned from the subcutaneous pubic flap.
Results: Patient has been discharged home on the 12 postoperative day. No postoperative complications occurred. Three years after the intervention cosmetic outcome is considered excellent by both surgeon and patient.
Discussion: The creation of a phallus is usually associated with multiple surgical problems, and efforts are ongoing to improve function and appearance. In our opinion pubic phalloplasty is a simple and relative quick procedure, lead to minimal scarring or disfigurements in the donor area.

15:30 – 16:15 **Moderated Posters 2 Basic Science**

Chairmen: **I Saenz de Tejada** (Spain), **U Simonsen** (Denmark)

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SELEGILINE (DEPRENYL®) ENHANCES ERECTILE ACTIVITY INDUCED BY DOPAMINE INJECTION IN THE PARAVENTRICULAR NUCLEUS OF THE HYPOTHALAMUS IN ANESTHETIZED RATS

Giuliano F., Allard J., Bernabe J., Derdinger F., Alexandre L., McKenna K., (France, USA)

Introduction and objective: Apomorphine delivered in the paraventricular nucleus of the hypothalamus (PVN) induces penile erection, suggesting a role for incertohypothalamic dopaminergic projections in the control of erection. We assessed whether 1) dopamine delivered in the PVN induces erectile activity and 2) the inhibitor of monoamine oxidase B, selegiline, an indirect dopaminergic agonist used in the treatment of Parkinson's disease, could enhance dopamine-induced erections.
Materials and Methods: Four groups of 8 anesthetized Sprague-Dawley rats were injected in the PVN with 10 µg dopamine or corresponding vehicle, 10 min after intravenous (i.v.) injection of 3 mg/kg selegiline or saline. Intracavernous and blood pressure (ICP and BP) were monitored for 30 min after the last injection to quantify ICP rises (number, percentage of ICP maximum/mean BP (ICPmax/BPx100), area under ICP curve/BP (AUC/BP)). Combined effects of dopamine and deprenyl were analyzed by 2 way ANOVA.
Results: In the groups pretreated with saline i.v., dopamine delivery in the PVN induced greater number of ICP rises (4.5±2.9 versus 1.4±1.9, p=0.017) with greater ICPmax/BPx100 (49±8% versus 34±9%, p=0.015 than the corresponding vehicle injection. AUC/BP of ICP rises was non-significantly increased by dopamine injection (14.7±9.3 versus 9.1±4.6 s). In the groups injected with dopamine in the PVN, 3 mg/kg selegiline pretreatment significantly increased the number of ICP rises (9.4±2.6 versus 4.5±2.9, p<0.001) compared to saline pretreatment. Selegiline i.v. pretreatment did not affect the amplitude of ICP rises induced by dopamine delivery in the PVN.
Conclusion: Selegiline i.v. delivery enhanced the erectile activity induced by dopamine injection in the PVN by increasing the occurrence of ICP rises. Thus, drugs potentiating dopaminergic responses in the central nervous system might be used to enhance proerectile commands of supraspinal origin.

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CHARACTERIZATION OF VARDENAFIL, A NEW PDE5 INHIBITOR FOR ERECTILE DYSFUNCTION, AND COMPARISON OF ACTIVITY WITH SILDENAFIL

Angulo J., Cuevas P., Fernandez A., Gabancho S., Pomerol J.M., Piugvert A., Ruiz- Castane E., Rive N., Rossello M., Saenz de Tejada I., Pages-Palau E., Bischoff E., Mondritzki T. (Spain, Germany)

Introduction: We have characterized the biological / pharmacological activity of vardenafil in enzyme assays on human corpus cavernosum (HCC) tissue and in a conscious rabbit model and compared it to that of sildenafil.
Methods: The potency (IC50) of vardenafil and sildenafil was studied in isolated enzyme assays including PDE1, 2, 3, 4, 5 and 6. HCC strips isometric tension recordings and cyclic nucleotide determinations were done in organ baths. Transmural electrical stimulation was used to evaluate neurogenic relaxation of trabecular smooth muscle. Rabbit penile length was determined following 0.2mg/kg sodium nitroprusside (SNP) (NO donor), given i.v. 60min after oral gavage of vardenafil and sildenafil at doses from 0.1 to 3mg/kg.
Results: Vardenafil was 10 fold more potent than sildenafil (IC50, 0.7nM vs 6.6nM, respectively). Both enhanced the relaxant responses induced by SNP but the threshold for significant effects was 3nM for vardenafil and 10nM for sildenafil. Both significantly enhanced acetylcholine-induced and nitrergic nerve-mediated relaxation of HCC. cGMP accumulation produced by NO (SNP 1µM) was potentiated by both compounds, but a significant increase was obtained with 3nM vardenafil, while 30nM sildenafil was required to reach a similar effect. Oral vardenafil enhanced erections induced by SNP and produced significantly higher and longer-lasting responses than sildenafil (see Tab.).
Erectile responses in conscious rabbits (n= 6/dose)

PDE5 Inhibitors	0.1mg/kg	0.3mg/kg	1mg/kg	3mg/kg
Sildenafil + SNP	59+/-15	76+/-19	151+/-24*	280+/-47**
Vardenafil + SNP	105+/-24*	210+/-24**	374+/-51**	549+/-86**

SNP alone (0.2mg/kg)= 31+/-7.5 (AUC; penile length in mm x min) * p<0.05, **0.01 vs SNP alone.