Tuesday 24 June 14.30–15.30
Poster Session 3: Andrology 1
Chairmen: C. Evans and S. Minhas

P020

A randomized crossover study to compare the efficacy of sildenafil and apomorphine in treating men with erectile dysfunction

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INTRODUCTION

Oral therapy is the first-line treatment for most men with erectile dysfunction (ED). Sildenafil is a peripherally acting selective phosphodiesterase-5 inhibitor and apomorphine acts centrally as a D2 selective dopaminergic antagonist. This is the first clinical study comparing these compounds.

PATIENTS AND METHODS

This was a multicentre, open-label randomized crossover study of 20 weeks' duration comparing sildenafil and apomorphine for treating men with ED. Efficacy was assessed by the International Index of Erectile Function questionnaire, GAQ, EDITS questionnaire and event logs. Safety and tolerance to treatment was assessed, as was patient preference. There were 118 evaluable patients (intention-to-treat) with a mean age of 56 years. The median duration of therapy was 56 days for sildenafil and 54 days for apomorphine.

RESULTS

Sildenafil improved the erectile function domain score more than apomorphine (13.7 vs 4.3, $P < 0.001$), improved the GAQ more than apomorphine (94.8% vs 51.7%, $P < 0.001$) and improved the EDITS score more than apomorphine (82.5 vs 46.8, $P < 0.001$); 75% of intercourse attempts were successful after sildenafil vs 35.3% after apomorphine ($P < 0.001$). The safety profiles of the two drugs were in line with those in published studies. The withdrawal rates were low in both arms; 96% of patients expressed a preference for sildenafil.

CONCLUSION

This study shows clear superiority for sildenafil over apomorphine for treating men with ED. The vast majority of patients expressed a preference for sildenafil.

Funding: Pfizer UK

P021

The optimum interval between intracavernosal injection and penile Doppler studies for the accurate diagnosis of vasculogenic erectile dysfunction

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INTRODUCTION

Vasculogenic erectile dysfunction (ED) is suspected if there is no response to an intracavernosal injection with papaverine. Power Doppler ultrasonography (DUS) of the penile vasculature is used to evaluate vasculogenic ED, to determine if it is caused by arterial insufficiency or venous leakage. The objective of this study was to determine the optimum interval between the intracavernosal injection and penile DUS for the accurate diagnosis of vasculogenic ED.

PATIENTS AND METHODS

In all, 117 patients (age range 29–77 years) with ED were evaluated using DUS with a linear probe (8 MHz). Diagnostic tests were undertaken after an intracavernosal injection with papaverine in titrated doses. The grade of erection, the peak systolic velocity (PSV), end-diastolic velocity (EDV) and resistive index (RI) were recorded frequently at 2.5-min intervals for up to 25 min. According to the response to the highest injected dose of papaverine, patients were classified into group A, those patients with elongation with no rigidity of the penis, and group B, those with a normal rigid erection.

RESULTS

After injecting papaverine, group A included 63% of the patients and Group B 37%. There was a significant difference in the PSV between the groups 5 min after injection ($P = 0.02$), but not after 10 min. However, there was no significant difference between the groups in EDV and RI 5 min after injection, but there was after 10 min ($P = 0.004$ and 0.001, respectively).

CONCLUSION

Penile DUS is a useful tool for evaluating vasculogenic ED. To detect arterial insufficiency, the optimum interval for testing the PSV is 5 min after injecting the highest dose of papaverine, and to detect venous leakage, the optimum interval for the EDV and RI is 10 min.

P022

Preventing the autoinflation of penile prostheses by using a new reservoir incorporating a lockout valve

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INTRODUCTION

The penile prosthesis can autoinflate in 6% of patients, and can be common soon after surgery, but long-term autoinflation necessitates surgical intervention. A new lockout valve has therefore been incorporated into the reservoir of the Mentor Alpha-1 inflatable penile prosthesis and in this report we assess its effectiveness.

PATIENTS AND METHODS

Between May 2001 and December 2002 an Alpha-1 penile prosthesis incorporating the lockout valve was inserted in 24 patients (mean age 47 years, range 26–68). Fourteen patients had primary implants and 10 were revisions. The reason for implantation was priapism in five, Peyronie's disease in four, pelvic fracture in four, after pelvic surgery in four, neurovascular in six and psychogenic in one. All prostheses were inserted through a transverse scrotal incision, and the reservoirs inserted blindly in 18 patients and through a separate abdominal incision in six. The reservoir capacity was 100 mL in two, 75 mL in 11 and 60 mL in 11 men. All reservoirs were underfilled by 5–20 mL except in three patients whose reservoir was filled to capacity.

RESULTS

There were no immediate complications after surgery although five patients developed a scrotal haematoma. Autoinflation occurred in five patients at 2 weeks but had resolved in all but two by 6 weeks. Neither of these improved spontaneously. The reason for autoinflation in these patients was overfilling of the system in one and encasement of the pump caused by the association of a hydrocele leak in the other. The autoinflation was resolved in these patients by removing fluid in one and repositioning the pump in the other. Both patients initially had their reservoir filled to capacity. At a mean (range) follow-up of 7.2 (1–19) months, 20 patients (83%) are satisfied with the outcome and 15 of 18 were having sexual intercourse.

CONCLUSION

Although there was long-term autoinflation in two patients early in the series there were iatrogenic reasons for this. In general, by underfilling the reservoir in combination with the new lockout valve, autoinflation should become extremely uncommon with a consequently reduced revision rate.

P023

Insertion of inflatable penile prostheses in patients with corporeal fibrosis

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INTRODUCTION

Corporeal fibrosis after infection or erosion of prostheses, Peyronie's disease, trauma or priapism represents a considerable challenge to the surgeon implanting a prosthesis. We have treated several patients for this problem and retrospectively reviewed our results.

PATIENTS AND METHODS

In all, 39 patients received inflatable implants for conditions producing a varying degree of corporeal fibrosis. Of these patients, 14 had Peyronie's disease. We modified our technique over the past 5 years and avoided corporeal reconstruction, using synthetic graft material to lessen the chances of infection. In cases with severe fibrosis we use a single transverse penoscrotal incision, Rossello dilators and a smaller prosthesis (e.g. Alpha Mentor narrow base, AMS 700CXM).

RESULTS

The mean follow-up was 32 months; 14 smaller prostheses were inserted. Intraoperative complications included three corporeal perforations and one urethral injury. Overall, two prostheses were removed for infection. Other complications included four erosions and two SST deformities. Of those with Peyronie's disease, 12 are still using their prostheses; of the other patients, 71% are still using theirs.

CONCLUSION

In patients with corporeal fibrosis the insertion of an inflatable penile prosthesis can produce a satisfactory result. In severe cases the use of a smaller prosthesis may reduce infection rates and such a prosthesis should be considered in any patient where corporeal fibrosis is a possibility.

P024

Long-term results for extracorporeal shock wave therapy for Peyronie's disease

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OBJECTIVE

To analyse the long-term results in patients having undergone extracorporeal shock wave therapy (ESWT) for Peyronie's disease.

PATIENTS AND METHODS

Patients previously treated with ESWT (3000 shock waves; Storz Minilith SL lithotripter) were included. The degree of angulation, before and after treatment, was measured by artificial vacuum induction of an erection. The mean (range) duration of disease was 19.4 (4–60) months, the number of ESWT sessions 3.4 (2–9) and the mean follow-up 44.1 (12–50) months. Pain during erection was measured using a visual analogue scale (VAS, 0–5).

RESULTS

Of 44 eligible patients, 38 (86%) were contactable for evaluation; of these, 10 (26%) subsequently underwent corrective surgery for failed ESWT. Of the remaining 28 patients, 18 (47% of the total) had a statistically significant improvement in angulation, with a mean (range) reduction of 33.2 (10–75)° ($P < 0.001$). Nine patients had no benefit and one had an increase in angulation of 10°. Sixteen of 18 patients with pain reported relief after ESWT, the mean reduction being 2.5 (0.5–5) on the VAS ($P < 0.001$). Of the 28 who had not undergone surgical correction, 65% reported erections suitable for intercourse, with 48% satisfied with ESWT, 30% dissatisfied and 22% uncertain; 70% would have ESWT if offered again. One patient complained of minimal penile shortening but no other long-term adverse events were noted.

CONCLUSION

Although a quarter of patients treated with ESWT resorted to surgery, in the absence of other effective non-surgical treatments, ESWT provides a useful, safe, conservative long-term management option which should be offered to all patients.

P025

Plaque incision and venous grafting as salvage after a failed Nesbit procedure

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INTRODUCTION

A revisional Nesbit procedure for a residual penile deformity from Peyronie's disease may present difficulties in dissection at the previous operative site and result in further penile shortening. The aim of this study was to analyse the outcome of plaque incision and venous grafting (the Lue procedure) in these patients.

PATIENTS AND METHODS

Over a 5-year period, 11 patients (mean age 48 years, range 33–66) presented with a residual penile deformity after a Nesbit procedure. All the patients had painless and stable Peyronie's disease and underwent a Lue procedure using plaque incision and venous grafts from the long saphenous vein. The outcome was assessed using standard criteria, recording the degree of penile shortening, quality of erections and penile angulation.

RESULTS

Before surgery the mean (range) angle of deformity was 50 (10–90)°. At a mean follow-up of 24 (5–58) weeks, eight patients had a straight penis and two a residual angle of 10–30°. One patient reported penile shortening and one the new onset of erectile dysfunction. There were two complications but no patient reported glans numbness. Overall, 10 patients reported either an excellent or satisfactory result after the Lue procedure.

CONCLUSIONS

These results indicate that the Lue procedure is highly effective salvage surgery to correct residual penile deformity after a failed Nesbit procedure in patients with Peyronie's disease.

P026

The use of modified human fascia lata in the surgical management of Peyronie's disease

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INTRODUCTION

The penile deformity associated with Peyronie's disease can be corrected by plaque incision and saphenous vein grafting, which minimises postoperative penile shortening. Using vein as a graft necessitates a second operative incision, increased morbidity and increased operative duration. Tutoplast™ (modified human fascia lata) is commercially available and acts as a scaffold for 3 months to allow tunical regeneration. Its use may reduce operative duration and morbidity. The aim of this study was to assess the outcome using this alternative graft.

PATIENTS AND METHODS

Over a 2-year period, 10 patients (mean age 50.7 years, range 34–59) with Peyronie's disease had their penile deformity corrected by plaque incision and Tutoplast grafting. Three patients had had a previous unsuccessful Nesbitt operation. Erectile function, penile deformity and stretched penile length were measured before and after surgery using standard criteria.

RESULTS

The mean (range) penile deformity before surgery was 72 (10–90)° and the mean follow-up 10 months. The results was successful (excellent or satisfactory) in seven patients; all had complete penile straightening, although five patients needed additional plication sutures to achieve this. One patient developed erectile dysfunction and three had penile shortening (> 1 cm). There were no operative complications.

CONCLUSION

The using Tutoplast is similar to that from saphenous vein grafting but without the morbidity associated with the donor site. However, there remains a significant risk of penile shortening and developing erectile dysfunction.

P027

Penile fracture: polypropylene vs polyglactin sutures in primary repair, and the effect on erectile and voiding function

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OBJECTIVE

To evaluate the sequelae and effect on erectile function of the primary repair of penile fracture using nonabsorbable and absorbable suture materials.

PATIENTS AND METHODS

The study comprised 23 patients who had a penile fracture (unilateral in 23 and injury to the corpus spongiosum in two). The penis was primarily repaired within 24 h of injury, using a running polypropylene suture (5/0) in seven patients and polyglactin (5/0) in 16, including one with a history of plaque. All patients were evaluated clinically after a mean of 18 months. Erectile and voiding function were evaluated during detumescence in all patients and a pharmacological erection induced in five.

RESULTS

Four of the seven patients repaired using polypropylene had suture pain during intercourse or masturbation but not on erection; deep pressure elicited pain and tenderness in these four patients, two developed insignificant penile curvature on erection, and suture knots were palpable in all four. The polyglactin suture was well tolerated in all patients, with neither suture pain nor penile curvature during sexual activity in 15 of the 16 who had no injury-induced penile pathology. Two patients were impotent but both had partial impotence before surgery (one a penile plaque). The other 14 patients had normal erections and denied any penile curvature during erection. The patient with plaque has significant curvature and a weak erection. All patients have normal voiding function and urine analysis.

CONCLUSION

Primary repair with the absorbable polyglactin suture is more sound and less morbid than with the nonabsorbable suture; the latter can cause pain during sexual intercourse and insignificant curvature on erection. The primary repair of a penile fracture regains erectile function in individuals with normal erection before injury.

P028

Permanent penile lengthening by intracavernosal injection with N-butyl-2-cyanoacrylate in dogs

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INTRODUCTION

N-butyl-2-cyanoacrylate is a watery tissue adhesive which hardens within 20 s in moist conditions, particularly in blood. The purpose of this study was to evaluate the feasibility and reliability of using an intracavernosal injection with cyanoacrylate to increase permanently the length of the penis in dogs.

MATERIAL AND METHODS

The study was conducted on six adult male mongrel dogs. Under general anaesthesia the prepuce of the penis was retracted and 10 mg of papaverine injected in the glans to induce an erection. Two animals were left as controls while in the remaining four a mixture of 0.5 mL cyanoacrylate and 0.75 mL lipidol was injected into the erect penis. A plain X-ray was taken of all injected penises. All dogs were clinically monitored for 3 months and then killed for the histological assessment.

RESULTS

There was no significant morbidity after injection in any dog; in the controls the erection subsided after 48 h, with resultant fibrosis of the glans. The plain X-ray showed the radio-opacity of the injected material within the soft-tissue shadow of the lengthened penis. In one dog there was ulceration of the squamous epithelium of the glans, with extrusion of the solidified material, having been injected superficially. Histologically, cyanoacrylate induced a minimal inflammatory reaction around it.

CONCLUSION

N-butyl-2-cyanoacrylate is a safe and inexpensive injectable bulk-enhancing agent which can be injected intracavernosally to produce a simple permanent lengthening of the penis for selected medical problems.

P029

Penile sensitivity and sexual satisfaction: effect of circumcision on British men

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INTRODUCTION

The effect of circumcision on penile sensitivity and overall sexual satisfaction remains controversial. A recent American study showed an effect of circumcision on penile sensation, sexual practices, satisfaction and function [*J Urol* 2002; **75**: 100–1]. We conducted this study to assess the effect of circumcision on sexually active British men.

PATIENTS AND METHODS

In all, 150 men age 18–60 years were identified as being circumcised between 1998 and 2001; those with penile cancer were excluded. A modified questionnaire was designed from an existing validated questionnaire and sent to all patients after ethical committee approval.

RESULTS

Of the 150 patients 79 (53%) responded; three-quarters of the men reported no change in their ability to maintain or attain erection. Similarly, 75% and 68% of patients had no change in the ejaculation and libido levels, respectively; 43% noticed less pain during intercourse and 42% thought their penile appearance improved after circumcision; 24% found sex less enjoyable, whereas 34% found it more enjoyable. The sensation in the penis was not significantly altered after circumcision (38% found it better, 34% no change and 16% worse, $P = 0.83$). The overall satisfaction was 60%.

CONCLUSIONS

Most patients are satisfied after circumcision; importantly, there was no significant change in penile sensation after circumcision. This information is beneficial when counselling men about circumcision.

P030

A review of the diagnosis, management and outcome of scrotal and penile lymphoedema

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INTRODUCTION

Scrotal and penile oedema is an uncommon but significantly disabling disease in terms of cosmesis and function. The causes and optimal management of this condition are uncertain.

PATIENTS AND METHODS

Between 1987 and 2002, 14 patients with scrotal and/or penile oedema were seen; their records were reviewed retrospectively for their diagnosis, management and treatment outcome.

RESULTS

The mean (range) age at diagnosis was 31.6 (15–54) years, with a duration of disease of 6–36 months. Two cases were related to Crohn's disease, one was secondary to filiriasis and one secondary to radiotherapy, and in 10 the cause was not defined. The site of oedema was penile in only three men, scrotal in two, penile and scrotal in seven and involved the genitalia and legs in a further two patients. Eleven patients had the genitalia reconstructed, including scrotectomy, circumcision, and de-bulking of skin and soft tissues. Skin grafting was necessary in one patient. In five of these patients the symptoms recurred, requiring revisional surgery. All patients are currently well and find the outcome of surgery satisfactory.

CONCLUSION

Oedema of the external genitalia is commonly idiopathic. If the disease becomes chronic surgical de-bulking with genital reconstruction is an effective option.