Case Report

Received: August 23, 1988

Accepted: November 7, 1988

Urol Int 1989;44:247-248

Penile Prosthesis in the Management of Priapism

A.		Mireku-Boateng
A.G.	Aaron G.	Jackson

Division of Urology, Howard University Hospital, Washington, D.C., USA

Key Words

Impotence
Priapism
Penile prosthesis

Abstract

Priapism is the abnormal persistence of erection, painful and not sexually induced. Many cases resolve spontaneously, but if it persists for a long time there is anoxic injury and fibrosis of the corporal tissues and the sequelae is impotence. The main problem with priapism is pain and the probability of a resultant impotence. We have managed 2 patients with recurrent priapism with insertion of penile prosthesis with satisfactory results.

A. Mireku-Boateng, MD, Division of Urology, Howard University Hospital, 2041 Georgia Avenue N.W., Washington, DC 20060 (USA)

Introduction

Priapism is the pathological prolongation of a penile erection, generally unassociated with sexual excitement. It can be primary or secondary. Secondary causes of priapism include sickle cell disease, trauma, neoplastic disease, e.g. leukemia, drug-related, etc. [1,3, 10]. There is anoxia of the tissues as priapism persists and anoxic injury to the corporal tissues. Fibrosis occurs as the tissues heal and impotence results. Many cases resolve spontaneously, but with each episode there is some corporal tissue damage.

Materials and Methods

Two patients, both with sickle cell disease who had had recurrent disabling episodes of priapism, were implanted with malleable penile prosthesis in an attempt to achieve two things: (1) to destroy corporal tissue to reduce the recurrent episodes of painful priapisms and (2) to manage impending erectile dysfunction at a time when it is much easier to implant penile prosthesis. These 2 patients had recurrent episodes of priapism and were in the hospital several times a month in painful priapism. This interfered with their ability to work, etc. Cavernosograms were done on these patients and there were corporal filling defects consistent with some fibrosis.

Case Reports

Patient 1: M.P.

A 22-year-old man with a problem with sickle cell anemia with hemoglobin SS. He had had problems with recurrent priapism and sickle cell crisis for several years. He admitted to painful priapisms almost every morning but these episodes resolved spontaneously usually after 2–3 h. He had had several hospital admissions for both priapisms and sickle cell crisis. Other significant medical and surgical history included cholecystectomy in 1984, right inguinal herniorrhaphy in 1980 and left orchidopexy in 1977. He had hepatomegaly and his X rays showed evidence of sickle cell osteodystrophy as well as aseptic necrosis of the left femoral head. His laboratory tests showed anemia with hemoglobin levels of around 7 mg%, hematocrit around 20%, reticulocyte

count of around 13% and serum creatinine of 0.6 mg%. In May 1985 he was admitted to the hospital with painful priapism which did not resolve with the usual management after 8 days. The idea of insertion of a penile prosthesis and the rationale was discussed with the patient and the family and a malleable penile prosthesis was inserted in May 1985 through a penoscrotal incision [1, 4].

Patient 2: D.C.

A 25-year-old male with sickle cell anemia with hemoglobin electrophoresis SS. He had had problems of painful priapisms on several occasions in the past. Every month he would be admitted to the hospital about 3 times because of priapism and/or sickle cell crisis. At the age of 17 he underwent appendectomy and cholecystectomy for appendicitis and cholelithiasis, respectively. At age 18 years he

248

Mireku-Boateng/Jackson

had a 2-day episode of priapism, underwent penile aspiration and glandulo-cavernosal shunt after the usual conservative methods of management failed [5–7]. He went on to develop scarring of the corpora cavernosa more severe in the distal half of the penile shaft [8]. He continued to have quite frequent painful priapisms after that. In January 1986 he was admitted to the hospital with a prolonged episode of priapism. The usual conservative methods of management of the episode were unsuccessful and he continued to have pain and priapism. At this time with the previous experience with one case it was decided to insert a malleable penile prosthesis. During the procedure corporal biopsies were taken, one from a clinically unfibrosed area, another from a clinically fibrosed area and also from the transition zone [1]. The penoscrotal approach was used in the implantation [4, 9].

Results

Malleable penile prostheses were implanted in these patients through penoscrotal incisions [2]. The largest-sized diameter which could comfortably fit in the corporal space was used. Biopsies of the corporal tissues were done. These showed fibrosis [11]. The creation of the intracorporal tunnel was done without much difficulty though it was more difficult than in the usual cases of impotence [4]. Surgery was performed in the usual manner. The patients did well postoperatively. They have been followed for 2.5 and 3 years, respectively, and they have not had any problems, no priapisms and no malfunction of their prostheses.

Discussion

While we do not advocate this method as a routine way to treat priapism, we feel that in the patients with frequent, recurrent painful priapisms where impotence is a major risk, it is an option to be considered. It is necessary to maximally dilate the corpora cavernosa so that as little corporal tissue is retained to decrease the incidence and degree of painful priapisms.

References

- Kaissary A V, et al: Aetiological factors and management of priapism in Bristol 1979–1983. *Ann R Coll Surg Engl* 1986;68:252–254.
- Small MP: Semi-rigid and malleable penile implants. *Urol Clin North Am* 1987;14:197–201.
- Taha SA, et al: Homozygous sickle cell disease and priapism in the eastern province of Saudi Arabia. *Acta Haematol (Basel)* 1987;77:60–61.
- Douglas LL: Technique for placement of Small Carion prosthesis post-priapism. *Urology* 1987;30:273–274.

Lue TF, et al: Priapism: A refined approach to diagnosis and treatment. J Urol 1986;136:104–108.

Winter CC: Priapism cured by creation of fistulas between glans penis and corpora cavernosa. J Urol 1978; 119:227–228.

Datta NS: A new technique for creation of a cavernosoglandular shunt in the treatment of priapism. J Urol 1986;136:602–603.

Borrelli M, et al: Segmental priapism. Urol Int 1986;41:156– 157.

Bertram RA, et al: Implantation of penile prosthesis in patients impotent after priapism. Urology 1985;26:325–327.

Tarry WF, et al: Urological complications of sickle cell disease in a pediatric population. J Urol 1987;138:592–594.

Spycher MA, et al: The ultrastructure of erectile tissue in priapism. J Urol 1986;135:142–147.