Journal of Pakistan Association of Dermatologists 2008; **18**: 56-59.

Case Report

Penile fibromatosis (Peyronie's disease): a rare disorder

Atif Shehzad, Shafiq-ur-Rehman, Saira Shaheen, Waqar Ahmad Khan, Muhammad Azam Bukhari, Saeed Ashraf Cheema*

Department of Dermatology, SIMS/Services Hospital, Lahore.
*Department of Plastic Surgery, SIMS/Services Hospital, Lahore.

Abstract Penile fibromatosis (Peyronie's disease) is an acquired benign condition without known systemic sequelae with presenting symptoms that include the presence of a plaque or induration of the penile shaft, penile curvature or deformity during erection, penile pain and erectile dysfunction. During the past decade significant advances have been made in understanding the pathophysiology of the disease, testing novel medical treatments for Peyronie's disease and improving the surgeons ability to successfully reconstruct the deformed penis. We report a case of a 40-year-old male who presented with penile pain and curvature during erection. We report this case of Peyronie's disease for its rarity.

Key words
Penile fibromatosis, Peyronie's disease, superficial fibromatosis.

Introduction

Penile fibromatosis (Peyronie's disease) is characterized by painful erections and curvature of the erect penis, which can be detected as a thickened, subcutaneous rubbery or hard plaque usually on the dorsal aspect of distal third of penile shaft. The condition is usually slowly progressive, but spontaneous regression may occur. It is one of the four superficial fibromatosis along with palmar fibromatosis (Dupuytren's contracture), plantar fibromatosis and knuckle pads. Its highest incidence appears to be between 40 and 60 years of age.[1] The etiology of Peyronie's disease remains a mystery. Atheroma predisposes to the condition. There may be a genetic factor, but reliable studies of the mode of inheritance are lacking.[2]

Address for correspondence
Dr. Atif Shehzad
Senior Registrar, Department of Dermatology, SIMS/Services Hospital, Lahore.

Case report

A 40-year-old, married young man presented in Dermatology OPD with history of painful erection and curvature of erect penis for the last 1 month. On examination he had a non-tender, rubbery plaque on the dorsolateral aspect of left side of penile shaft in its distal half. The erection was so painful that the patient was unable to perform sexual intercourse. Intracavernosal injection of papaverine was given which showed deviation of penile shaft towards left side. High resolution ultrasonography and color/spectral Doppler study of the erect penis was performed showing thickening of the tunica albuginea over left corpus cavernosum measuring 35×7mm **(Figure 1)**, which confirmed our diagnosis. Systolic and diastolic velocities of cavernosal arteries and their diameters were normal **(Figure 2** and **3)**. Corpora cavernosa showed no calcification. The patient was referred to the plastic surgeon for further management.

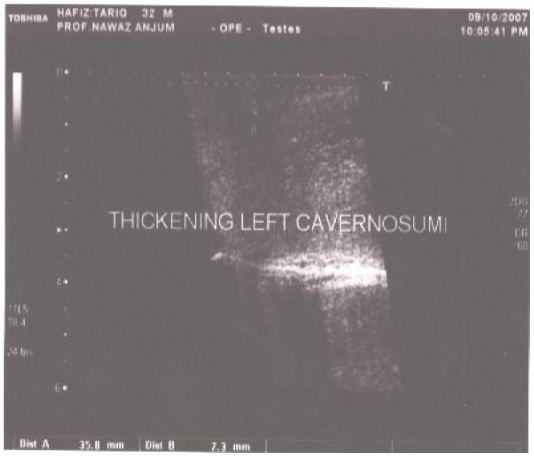

Figure 1 Thickening of the tunica albuginea over left cavernosum measuring 35×7mm.

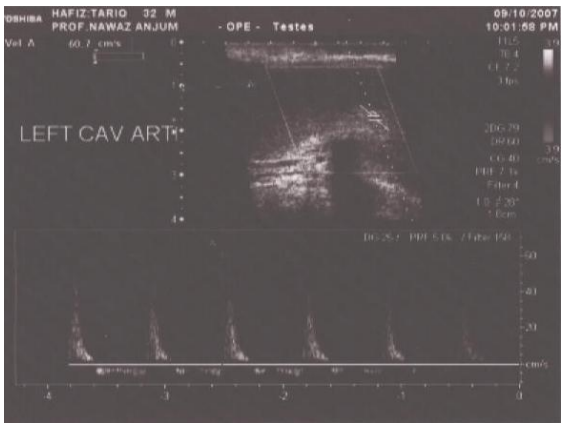

Figure 2 Normal systolic, diastolic velocities and diameter of left cavernosal artery.

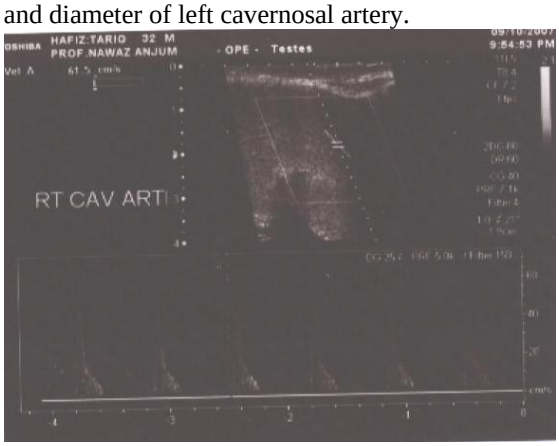

Figure 3 Normal systolic, diastolic velocities and diameter of right cavernosal artery.

Nisbet's operation was planned, in which ellipses of normal tunica albuginea are excised from the side of the shaft, opposite the point of maximum curvature.

Discussion

Peyronie's disease was first described in 1704. It is named after Francois de la Peyronie, who in 1743 described a patient who had rosary beads of scar tissue to cause upward curvature of penis during erection.[3] The penile curvature of Peyronie's disease is caused by inelastic scar or plaque that shortens the corpora cavernosa during erection. In approximately one third of the patients the scarring involves the dorsal and ventral aspects of shaft, such scarring may cause the penis to be straight but shortened or to have a lateral bend. The circumference of the shaft may also be reduced resulting in an erect penis that is flail at the site of constriction, firm proximal to the constriction and soft distally **(Figure 4).**

Pathologic examination of the thickened plaque shows cellular fibroelastic proliferation surrounded by dense masses of collagen.[4] Calcification and ossification may occur. These calcified plaques are seen on radiographs.[5]

Various potential etiologies suspected are penile trauma, its association with conditions with loss of elasticity, flexion of tunica albugenia leading to tear, bleed, clot formation and subsequent fibrin deposition.[6] Treatment of Peyronie's disease is challenging and may include colchicine,[7] potassium para-aminobenzoate,[8] tamoxifen,[9] acetyl-L-carnitine[10] and vitamin E.[11] Intralesional therapies include steroids,[12] verapamil[13] and interferon.[14] Local extracorporeal shock wave therapy and lithotripsy have also been tried.[15,16] Surgical therapy is the treatment of choice especially in those men who fail to perform sexual

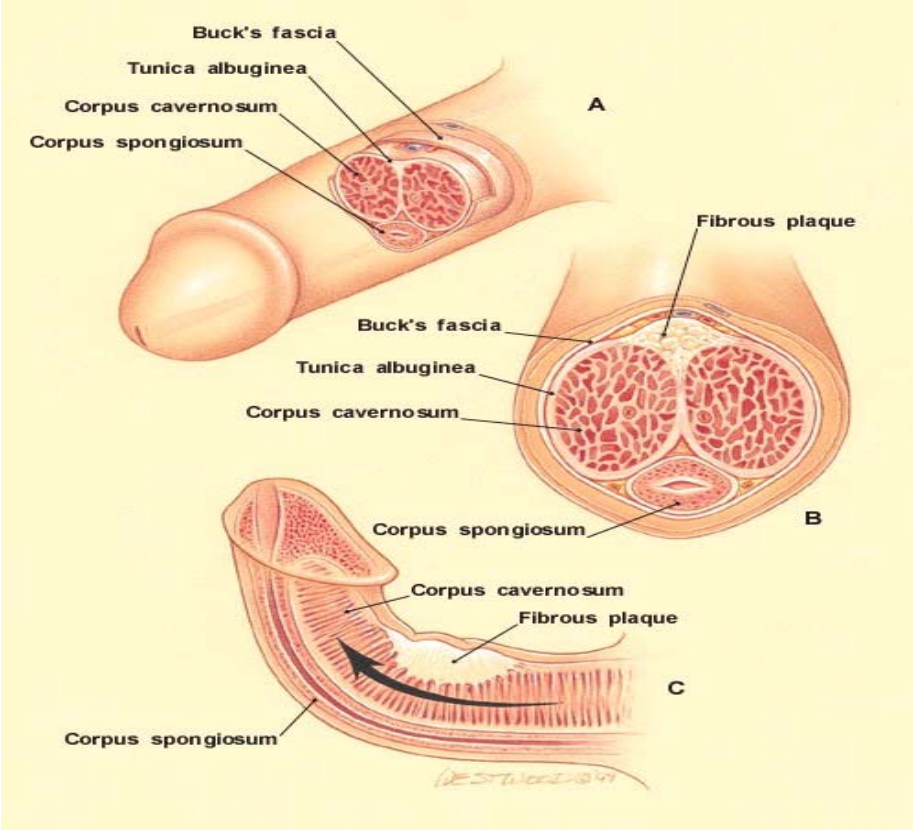

Figure 4 Fibrosis of the underlying cavernous erectile tissue leading to curvature of the penile shaft.

intercourse due to penile curvature and pain.[15]

Our patient was a typical case of Peyronie's disease. The diagnosis was confirmed by high resolution ultrasonography showing thickening of tunica albuginea and no evidence of any bleed or clot formation. A survey of 732 patients demonstrated an association between penile trauma and both Peyronie's disease and erectile dysfunction.[17] In our case the etiology remains a mystery but minor sexual trauma may be the cause of the problem. We offered surgical treatment to the patient.

Acknowledgement

We are highly grateful to Mr. Muhammad Shahbaz Dar for his valuable contribution in the final layout of the manuscript.

References:

1. Phatak SV, Kolwadkar PK, Phatak MS. Peyronie's disease: A case report. *Indian J Radiol Imaging* 2004; **14**: 153.
2. Jalkut M, Cadavid NG, Rajfer J. Peyronie's disease: a review. *Rev Urol* 2003; **5**: 142-8.
3. Peyronie DL. Sur quelques qui s'opposent a l'ejaculation naturelle de la semence. *Mem Acad R Chir* 1743; **1**: 425.
4. Davis CJ. The microscopic pathology of Peyronie's disease. *J Urol* 1997; **157**: 282-4.
5. Gamanagatti S, Hiralal S. Peyronie's disease. *Ind J Radiol Imag* 2003; **13**: 155

6. Devine CJ, Somers KD, Jordan SG, Schlossberg SM. Proposal: trauma as the case of the Peronie's lesion. *J Urol* 1997; **157**: 285-90.
7. Akkus E, Carrier S, Rehman J *et al*. Is colchicine effective in Peyronie's disease? A pilot study. *Urology* 1994; **44**: 291-5.
8. Carson CC. Potassium para-aminobenzoate for the treatment of Peyronie's disease: is it effective? *Tech Urol* 1997; **3**: 135-9.
9. Teloken C, Rhoden EL, Grazziotin TM *et al*. Tamoxifen versus placebo in the treatment of Peyronie's disease. *J Urol* 1999; **162**: 2003-5.
10. Biagiotti G, Cavallini G. Acetyl-L-carnitine vs tamoxifen in the oral therapy of Peyronie's disease: a preliminary report. *BJU Int* 2001; **88**: 63-7.
11. Gelbard MK, Dorey F, James K. The natural history of Peyronie's disease. *J Urol* 1990; **128**: 1376-9.
12. Winter CC, Khana R. Peyronie's disease: results dermo-jet injection of dexamethasone. *J Urol* 1975; **114**: 898-900.
13. Levine LA, Goldman KE, Greenfield JM. Experience with intraplaque injection of verapamil for Peyronie's disease. *J Urol* 2002; **168**: 621-6.
14. Duncan MR, Berman B, Nseyo UO. Regulation of the proliferation and biosynthetic activities of cultured human Peyronie's disease fibroblasts by interferon-alpha, -beta, and -gamma. *Scand J Urol* 1991; **25**: 89-94.
15. Manikandan R, Islam W, Srinivasan V, Evans CM. Evaluation of extracorporeal shock wave therapy in Peyronie's disease. *Urology* 2002; **60**: 795-800.
16. Abdel-Salam Y, Budair Z, Renner C *et al*. Treatment of Peyronie's disease by extracorporeal shockwave therapy: evaluation of our preliminary results. *J Endourol* 1999; **13**: 549-52.
17. Jarow JP, Lowe FC. Penile trauma: an etiologic factor in Peyronie's disease and erectile dysfunction. *J Urol* 1997; **158**: 1388-90.