Priapism in type II Diabetes Mellitus: A case report.

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Priapism in type II diabetes mellitus is an uncommon event. A case of this condition in an adult male is presented. More common precipitating factors such as use of medications like sildenafil or use of an intracarvenosal vasodilator was absent, although diagnostic investigations postulated the cause as thrombotic factors in type II diabetes. A cavernoso–spongiosal shunting procedure was performed and a cystofix inserted to divert urinary flow. However, due to the late presentation of the priapism, much erectile tissue was damaged and normal function of the organ could not be restored.

Introduction

Priapism is a persistent penile erection that does not arise from sexual desire and that fails to subside despite orgasm. It is an uncommon condition with a reported incidence of 1.5 per 100,000 men[1]. It is even rarer in diabetic patients; indeed diabetes mellitus is known to cause erectile dysfunction. This paper reports such a case of priapism associated with type II diabetes mellitus, outlining its presentation, investigation and management procedure undertaken,

Case report

J.K. a 51-year old pastor with type II diabetes mellitus for the previous $2^1/_2$ years with no known addiction habits presented with acute priapism of four days duration, and an abscess in the left gluteal area. There was no history of use of any offending medications, or intracavernosal vasodilator, and neither was there any history of a similar episode in the past. Glycaemic control was sub-optimal; the patient had been on chlorpropamide (diabinese) 500mg daily and metformin 850mg daily.

Local examination a temder and oedematous tender and oedematous penis with a suspicious area of gangrenous change in the urethra and a partially drained abscess in the gluteal area. He was also febrile. The patient had a supine blood pressure of 120/80 with no postural drop. There was no pedal oedema and no evidence of proliferative diabetic retinopathy. The general clinical examination was otherwise normal.

Investigations performed during the patient's stay in hospital were as follows:

A full haemogram was normal except for a leucocytosis of 16,800/mm^3 and an ESR of 70mm/hr. His lipid profile revealed a normal cholesterol level but very high triglycerides, conforming to type IV of Fredrichson's ranking. Blood urea and creatinine were normal. Both fasting and post-prandial blood glucose were elevated (17.8 and 19.5mm/l respectively). Glycerated haemoglobin HBA1C) was 11.25%. There were no ketones in urine but there was a trace of sugar. Haemoglobin electrophoresis was of normal adult pattern. Plasma fibrinogen levels were elevated (406mg/% the normal range being 150-375). A chest X-ray and ECG were normal. Abdominal and pelvic ultrasounds were normal.

Surgical opinion was sought during, upon which a cavernoso-spongiosal shunting procedure was done. The penis collapsed after altered blood and much gas were drained although it remained oedematous. A cystofix was inserted to divert urinary flow. This healed quickly. The abscess was fully drained, tailored and the cavity closed in a single layer. The serosanguinous fluid, which was sterile on culture, continued to drain from the penis. The cystofix came out accidentally, allowing the patient to pass urine normally. He developed a

peno-scrotal fistula, which drained a lot of pus. Surgical exploration revealed gangrene of the whole penile urethra and parts of spongiosum. A supra-pubic catheter was inserted; the gangrenous parts dressed and patient referred for urological care. The urologist performed a proximal urethrotomy to allow the gangrenous urethra to heal.

Discussion

Priapism may occur in association with sickle cell disease, leukaemia, disorders of coagulation, renal dialysis, and after spine injury. Most often the erection is due to idiopathic thrombosis occurring in the prostatic venous plexus. Secondary malignant deposits in the corpora cavernosa or in the pelvis that cause priapism have been reported[2]. There is also a case report of priapism associated with appendicitis[3]. Clitoral priapism has been reported as a rare cause vulvar pain in women[4]. Virtually all anti-psychotic medications have been reported to rarely cause priapism due to their alpha-adrenergic antagonism that prevents detumescence[5]. Our patient did not have any of the above precipitating factors, and repeated platelet counts revealed no thrombocytosis.

Priapism in type II diabetes mellitus, as reported by Sengupta et al[6] in 2001, is usually iatrogenic, resultant of intracarvenosa vasodilatation injection following impotence[7]. This was however not the case in this patient. Type II diabetes mellitus and Syndrome X of which it forms part, are known to be associated with prothrombotic tendency in view of increased levels of fibrinogen, Von Willlebrandts factor and plasminogen activator inhibitor 1[PAI-1][8]. this patient had elevated plasma fibrinogen levels. Although we did not carry out testis for Von Willebrandt's factor and PAI-1, it seems reasonable to postulate that the cause of priapism in our case was due to these known thrombotics in type II diabetes mellitus.

Operative treatment by insertion of a venous shunt (e.g. saphenous vein to corpus carvernosa or corpora carvenosa to corpus spongiosum), when carried out within the first 48 hours (preferably 6-12 hours), gives satisfactory results, allowing the patient to achieve normal erection subsequently. Corpus carvenosus puncture through the glands has been used efficiently in treating in treating children who have presented early with priapism[9]. Recanalization of embolized cavernosal artery has restored patency in a patient with high flow priapism[10]. Success has been reported after intravenous phenylephrine injections for recurrent priapism and intravenous injection with etilefrine[11]. Sickle cell patients' priapism needs long-term follow up in order to recognize any minor recurrences, which if unchecked could be the principal cause of fibrosis and impotency[12]. Our patient presented late with priapism complicating local and systemic infection. The erectile tissue was already badly damaged and the decision to reserve the organ was purely for its sentimental value.

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