CHRONIC INTERMITTENT PRIAPISM

BY

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Priapism is a condition of persistent involuntary painful erection of the penis, not leading to orgasm. The term derives from Priapus, a Greek fertility god who is represented as an ugly man with an enormous and erect penis.

In many cases a cause can be found but in others the condition is idiopathic. If it persists for more than 12 hours, it may affect the patient's potency at a later date. A large number of aetiological factors have been reported, the most important causes, as enumerated by Douthwaite (1960), being as follows:

- (1) Injury to the upper dorsal region of the spinal cord.
- (2) Leukaemia.
- (3) Sick cell anaemia.
- (4) Urethral neoplasm.
- (5) Local trauma with formation of a haematoma.

Recently priapism has been reported as a complication of transurethral resection of the prostate gland and of tuberculous anal fissures (Plauchu, Dalmais, and Nové-Josserand, 1961).

Frequently repeated erections of fairly long duration, but lacking the persistence of true priapism, which are described as chronic intermittent priapism, usually occur at night (Douthwaite, 1960). This condition is not due to mechanical causes but to neural irritation arising from lesions of the central nervous system or from reflex irritation from local lesions of regions with the same segmental supply as the corpora cavernosa, *i.e.* the posterior urethra, prostate gland, or seminal vesicles. In young adults this type of priapism can occur while sleeping on the back with a full bladder; it may also be precipitated by sexual excitement. In elderly people it is frequently associated with prostatic enlargement.

Case Report

A man aged 26 came to the clinic at about 9 a.m. with the complaint of painful erection of the penis which had awakened him at 4 a.m. and had persisted for the past

5 hours. He had had two such attacks earlier in the same month and on each occasion the sequence of events was the same. He had had a pre-marital sexual contact about 18 months previously which was followed by burning sensation on micturition, urethral discharge, a large painful ulcer on the penis, and a bilateral bubo which burst. He had then received injections of novarsenobillon.

Examination.—The patient walked with his back flexed. The penis was erect; its length from the symphysis pubis to the tip was 16 cm., and its circumference in the centre 13 cm. The inguinal groups of lymph nodes on both sides were slightly enlarged and firm, and there was a small oval scar 1 cm. in length in each inguinal area.

Investigations.—There was no urethral discharge on milking the urethra. The urine showed threads macroscopically, and microscopic examination showed numerous pus cells and epithelial cells but no *Neisseria gonorrhoeae*. A wet smear of prostate fluid showed ten to fifteen pus cells per high-power field and a few clumps of five to six pus cells and a few epithelial cells each. The VDRL test was negative. Total and differential leucocyte counts were within normal limits. There was no anaemia and a blood film showed no sickle cells.

Treatment and Progress.—The patient was given 1/6 gr. morphine and 0.01 gr. atropine at 9 a.m., and 2.25 gr. phenobarbitone was given intramuscularly at 11 a.m. Up to 2 p.m., 10 hours after the start of the attack, there was no relief. Cold compresses were then started, and 2 hours later the length of the penis had diminished to 13 cm. and the circumference to 11 cm. The pain was much reduced and the penis became flaccid; 6 days later the length was 10 cm. and the circumference 7 cm. and the patient had normal erections. He was then put on 1.5 g. terramycin daily in divided doses for 10 days. Prostatic massage was performed daily for 10 days and then twice weekly for 3 months.

No further attacks of priapism occurred during a 6-month follow-up, and the patient was able to live a happy married life.

Discussion

Our patient had three attacks of priapism in one month. The two earlier attacks were of only 5 to 6

hours duration, and subsided without treatment, the attacks occurring at night, when usually both bladder and rectum are full. The last attack was of much longer duration and energetic measures were required before relief was obtained. Investigation disclosed definite evidence of prostatitis. Prostatic enlargement has been described as a cause of chronic intermittent priapism in elderly men but not hitherto in young adults. Inflammation of the prostate or posterior urethra may cause priapism, because the nerve supply to the corpora cavernosa, prostate, and urethra comes from the same source, the prostatic plexus of nerves. Prostatitis or urethritis may thus cause a reflex stimulation of parasympathetic fibres supplying the corpora cavernosa, with active vasodilatation of the arteries supplying it and probable constriction of the venous outflow. The fact that no further attacks were observed during 6 months follow-up after treatment of the prostatitis offers indirect evidence that chronic prostatitis caused the recurrent attacks of priapism in this case. A full bladder and rectum and lying on the back were perhaps additional factors, as attacks of chronic intermittent priapism tend to be nocturnal.

Chronic intermittent cases may go on to true priapism if some physical cause such as chronic prostatitis is present. Many reports of so-called "idiopathic priapism" do not mention the examination of prostatic secretions; it is suggested that tests for the presence of prostatic inflammation or urethritis should be performed in such cases.

It is generally accepted that the initial treatment should be conservative, but this should be maintained for only 12 to 24 hours from the start of the attack (Farrer and Goodwin, 1961). Heavy doses of morphine and atropine may be given at the outset, the former to sedate the patient and the latter to block parasympathetic activity; but this is usually not very effective, and powdered ice or cold compresses should be applied to the penis to encourage vasoconstriction. Our patient improved satisfactorily with this treatment. Sitting spinal anaesthesia or continuous peridural block is also worth trying as it blocks the parasympathetic nerves. It may also be beneficial to start anticoagulant therapy immediately to prevent blood coagulation in the corpora cavernosa; this procedure must be accompanied by regular control of the prothrombin time.

If these conservative methods fail, other possible measures include aspiration of the corpora cavernosa through a wide-bore needle; venous by-pass between the corpus and the distal end of the divided saphenous vein (Grayhack, McCullough, O'Connor, and Trippel, 1964); caverno-spongiosum anastomosis (Quackels, 1964); aspiration of the corpora cavernosa under controlled hypotension with intravenous trimethaphen camphorsulphonate (Krauss and Fitzpatrick, 1961) or any other ganglion-blocking agent. Farrer and Goodwin (1961) said that the most promising approach was to irrigate the corpora cavernosa with anticoagulant solution after evacuation. Fibrinolytic enzymes used locally and systemically may help to restore the normal vascular function of erectile tissue and so prevent the risk of subsequent impotence.

Summary

A case is described of chronic intermittent priapism associated with chronic prostatitis. Their causal relationship is discussed and methods of therapy are reviewed.

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Un cas de priapisme intermittent chronique

RÉSUMÉ

Un cas de priapisme intermittent chronique associé à une prostatite chronique est décrit. Leur relation causale est discutée et les méthodes thérapeutiques sont passées en revue.