The treatment of priapism by corpus-saphenous by-pass

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Summary

Two cases of priapism treated by corpus-saphenous by-pass are presented. Priapism responded to treatment successfully in both cases. Satisfactory erection and sexual intercourse followed 6 weeks after operation in one case. The second patient failed to have further erections. It was thought that this was due to the length of time (6 weeks) between onset of priapism and operation.

Introduction

Priapism is a pathologically prolonged erection not associated with sexual desire and usually painful. Priapism is due either to increased neurogenic stimulation or more usually clotting in the corpora cavernosa and prostatic plexus and obstruction of the venous outflow of the penis (Hinman, 1960). Thus in 1964 Grayhack et al. devised a method of diverting the venous outflow via a long saphenous shunt to the femoral vein. As the corpora cavernosa communicate distally with each other a unilateral shunt is usually sufficient. In this paper, two cases of priapism treated by corpus saphenous by-pass are presented.

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Case reports

Case 1. A 31-year-old Negro was admitted to hospital with a 36-hr history of priapism. For 2 weeks before admission he had had prolonged erections on waking in the morning. Thirty-six hours before admission he had indulged in prolonged sexual intercourse with his wife. Since then his penis had been painful and erect. He had had a similar episode 7 years previously when he had had an erection for 1 day. This had resolved spontaneously.

Examination revealed a well built Negro with a temperature of 100°F. His penis was turgid, erect and very hard and measured some 8 in. He had a tender, palpable lymph node in the left groin. Investigation revealed Hb 68%; WBC 6000 with a normal differential; ESR 135 mm/hr. Sickle test was negative.

He was initially treated with streptokinase 1,200,000 units i.v. as a loading dose and 6000 units 6-hourly for 24 hr. His penis remained erect. Right corpus cavernosum by-pass was then performed. At the end of the procedure the penis was softer and 1 in shorter. During the first 48 hr of the post-operative period the penis was compressed intermittently, using a child's sphygmomanometer cuff. During the ensuing period his penis became smaller and softer still, and his temperature and ESR...
returned to normal. Recovery was uneventful. Examination of the graft 6 days postoperatively with the Doppler ultrasound revealed an arterial-like sound which was much increased by squeezing the penis.

Six weeks postoperatively be recommenced sexual relations with his wife and when seen in follow-up 1 year later was having sexual intercourse 3 times per week, although his wife said that his penis never became quite as hard as before the operation.

Case 2. A 58-year-old retired Kenyan Asian was admitted with a 6-week history of priapism. In spite of the fact that he had two wives at the time, priapism had occurred spontaneously. He had been admitted to hospital while on a return trip to Kenya and there had been treated with cold lotions, anticoagulants and spinal anesthesia, all to no avail. He returned to England and was admitted to Whipps Cross Hospital.

Examination revealed a fit man, temperature 98.4°F, pulse 80, and the only abnormal finding was a tender, erect penis. Right corpus saphenous by-pass was carried out and his penis became flaccid and has remained so. His postoperative recovery was complicated by a wound infection.

Discussion

Medical treatment of priapism has been of little success. Callaway (1824) reported cold lotions, leeches, emetics and narcotics to be of no avail. Anticoagulants have not helped and indeed priapism has occurred in patients on anticoagulants (Grace and Winter, 1968; Edie and Brock, 1970). Hypotensive therapy (Ulm, 1959) has been useful but not regularly successful. Streptokinase failed to relieve priapism in one of our cases.

Surgical treatment has an equally long history. Callaway (1824) incised the corpus cavernosum—relieving the priapism but impotence resulted. In 1960 Burt, Schirmer and Scott successfully treated a patient with priapism by pudendal ligation. To date, Grayhack's operation of corpus saphenous shunt has met with the greatest success. Of the cases so far reported, all twenty have had their priapism relieved and most (fourteen) have returned to normal sexual function (see Table 1). Where there has been a failure to re-establish erection there has usually been a delay in performing corpus cavernosum saphenous by-pass, and fibrosis in the corpora has occurred.

The operation has been complicated by pulmonary embolus in one case (Kandel, Bender and Grove, 1968). Fortunately, this was not fatal and a satisfactory result was obtained. The only other complication reported is a wound infection which occurred in one of our patients.

Table 1. Results of corpus-saphenous by-pass in the treatment of priapism

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>No. of cases</th>
<th>Priapism relieved</th>
<th>Potent afterwards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>Grayhack et al.</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1966</td>
<td>Garrett and Rhamy</td>
<td>5</td>
<td>5</td>
<td>4 (1 failed to attend follow-up)</td>
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<tr>
<td>1968</td>
<td>Gray and Winter</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1968</td>
<td>Kandel et al.</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1969</td>
<td>Martinez et al.</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1969</td>
<td>Martin, Schapiro and Burkholder</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>1970</td>
<td>Edie and Brock</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1972</td>
<td>Chi Meen Lee, Kandzari and Milan</td>
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<td>1974</td>
<td>This paper</td>
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<td>2</td>
<td>1</td>
</tr>
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<td>20</td>
<td>20</td>
<td>14</td>
</tr>
</tbody>
</table>

Acknowledgments

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References


