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POINT OF TECHNIQUE

# A simple method of treating priapism in children

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## Indications

Priapism in children is most often seen as a complication of sickle cell disease. The clinical expression of priapism is less intense in children and the results of non-surgical treatment are more favourable compared to that in adults. However, there are exceptional cases of childhood priapism resistant to conservative management, and various surgical methods instituted for such cases have been reported. A modification of Winter's procedure, which is a simple and effective method of temporary shunting between the glans and corpora cavernosa, was successfully employed in a boy with low-flow priapism [1].

## Method

A 14-year-old boy was admitted with a painful penile erection of 4 days duration. He had been receiving erythropoietin treatment for his previously diagnosed Beta/S thalassaemia (double heterozygous, carrying both Beta thalassaemia and sickle-cell genes), and had been transfused a total of 46 units of blood in the last 5 years. On physical examination, he had priapism involving the corpora cavernosa. The glans was flaccid, but the corpora cavernosa were turgid.

The erythropoietin was discontinued, and 2 units of fresh blood were transfused rapidly. After failing to get any response from sedation with diazepam and ice-pack application he was taken to the operating theatre. Under general anaesthesia, corporal aspiration and irrigation was attempted. Viscous blood was aspirated, giving transient relief for a few minutes. Then, to create a temporary cavernoso-glandular shunt, two 14 G standard plastic catheters (Angiocath, Deseret Medical, Inc, Becton Dickinson and Co, Sandy, Utah, USA) with several side-holes created along their length were inserted via the glans into both corpora cavernosa (Fig. 1). Particular care was taken not to cut side-holes opposite one another, or too close together. After initial aspiration of a few millilitres of entrapped blood, the catheters were plugged at the open end and fixed with a single suture placed on the dorsal glandular skin. The catheters were left in place for 48 h, and the penis was squeezed every 10 to 15 min during this period to facilitate the passage of blood through the catheters from the corpora cavernosa to the glans and corpus spongiosum. Complete detumescence was achieved with the technique used.

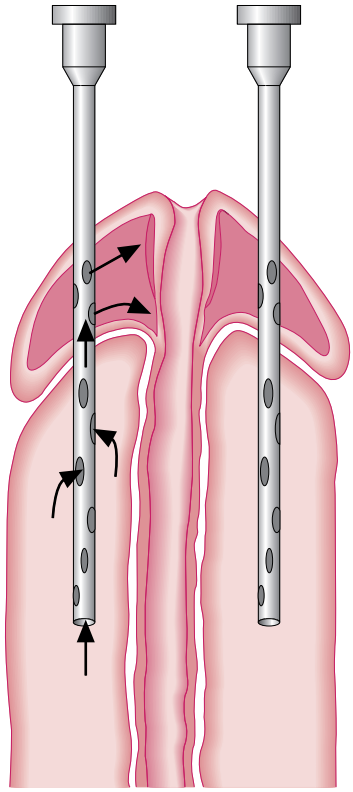

**Fig. 1.** Schematic drawing of the technique used.

Twelve months of follow-up revealed no recurrence or complications related to the procedure. Normal penile erections were regained at 2 months after surgery.

## Comparison with other methods

Children comprise less than 15% of the cases of priapism, with sickle-cell disease as the major aetiological factor.

Conservative therapy, including exchange blood transfusion, adequate hydration and hyperoxygenation may give excellent results [2]. However, if non-surgical treatment does not result in detumescence, general intervention measures, e.g. corporeal aspiration and irrigation, intracorporeal α-adrenergic drug injection and shunt procedures, may be necessary for some children. Of the several shunt procedures, the cavernoso-glandular shunt, simultaneously described by Winter [1] and Ebbehoj [3], has been the most commonly performed, due to its ease and simplicity. The procedure creates fistulae or windows in the fibrous albuginea between the glans and corpora cavernosa by removing pieces of septal tissue [1]. Recently, Kilinç reported a modification of Winter's procedure using a new trocar [4]. The main goal of this new modification was to create a fistulous connection without removing tissues. With the same rationale, we used a plastic intravenous catheter, which is more readily available and easily manipulated.

## Advantages and disadvantages

This is a simple and comparatively less invasive method of providing a flow from the corpora cavernosa to the glans; the catheter is widely available. The method requires no technical expertise and the inherent risk is no more than simple corporal blood aspiration. It is temporary and may be repeated in cases of recurrence.

## Difficulties and complications

The calibre of the catheter should be adjusted according to the age of the child. The insertion of a catheter larger than necessary may result in late closure or persistence of the fistula after removal of the catheter, which we think is one of the major reasons for post-operative impotence. The gradual restoration of normal penile erections observed in the present case during the second post-operative month can be explained by progressive closure of the fistula at that time.

It is important not to cut side holes opposite one another, or too close together, as this may weaken the catheter and cause it to snap when it is removed. Although our experience is limited to a single case, the risk of complication appears to be low. Before proceeding with other surgical manoeuvres, we recommend this easy and effective method for the treatment of children with low-flow priapism, should non-operative methods fail.

## References

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