

# Outcome of Priapism after Early & Late Management

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**Objectives:** To assess the outcome of patients presenting with priapism during the last six years. **Patients & methods:** Record of the patients presenting with priapism was evaluated retrospectively. Following parameters were assessed; etiology, duration, management, complications and final outcome. **Results:** Fifteen patients with mean age of twenty seven years presented from Jan 2000 to Dec. 2006. Etiological factors were intracavernosal injection of papaverine 6 (40%), hakeem medication 4 (26.7%), thalasemia 2 (13.3%) and idiopathic in 3(20%) patients. Mean duration of priapism was 80.8 hours. Initial conservative management was successful in 7 (46.7%) patients. Non responders were treated with distal cavernospongiosus shunt. Out of eight, three (37.5%) patients responded and remaining four ended up with corporeal fibrosis and erectile dysfunction(ED). One patient develop urethrocutaneous fistula. **Conclusion:** Intracavernosal injection of papaverine and hakeem medicines are common etiological factors. Patient usually present late because of embarrassment. Outcome of management depends upon duration of priapism.

**Key words:** Priapism, late presentation, management.

Priapism is defined as persistent painful erection limited to corpora cavernosa, lasting for > 6 hours and is not accompanied by sexual stimulation or desire<sup>1</sup>. Etiologically it is divided into primary or idiopathic and secondary to some other disease entity. It is important to distinguish between the low flow and high flow priapism for the purpose of management. Most of the cases of priapism are associated with low flow state<sup>2</sup>. Factors such as duration, past history, underlying cause, sexual pleasure and pain are important to establish the diagnosis and predict the final outcome. The diagnosis is confirmed on local examination whereas low and high flow states can be differentiated by color flow doppler ultrasound<sup>3-5</sup> and blood gas analysis of aspirated blood<sup>2,6</sup>.

Various treatment options are available. Conservative management is tried first. Oral terbutaline is successful in 36%cases<sup>7</sup>. Other recommended medications are antidepressants, antipsychotics and antiandrogens<sup>8</sup>. If these measures fail then aspiration and irrigation of corpora and  $\alpha$ -adrenoceptor injections are tried. If the erection persists only then the shunting procedures are carried out<sup>9</sup>. First glanulocavernosal shunts is made, if it is unsuccessful, more proximal shunts (spongioso-cavernosal and sapheno cavernosal)<sup>1</sup> are tried.

Despite early operative measures, erectile dysfunction(ED) may be seen in about 50% of cases of low flow priapism<sup>10,11</sup>.

Other complications associated with priapism are recurrence of priapism, bleeding, infection, skin necrosis, gangrene and urethrocutaneous fistula<sup>14</sup>.

Low flow priapism should be treated within 36-48 hours as the ultrastructural changes start appearing after that<sup>15</sup>. ED and penile fibrosis are less common in patients treated early and shunting procedures are also less frequently required<sup>2</sup>.

The present study was to review the cases of priapism and establish a relationship between duration of priapism and clinical outcome.

## Patients and methods

This was a retrospective study carried out from the patients record between Jan 2000 and Dec. 2006 both inclusive. Fifteen consecutive patients with priapism were included in the study.

The parameters studied were; age, marital status, etiology, duration of illness, treatment modality and complications. Initially all patients were treated under local anaesthesia with aspiration of corpora with a 19 G scalp needle (Fig. 1). Corpora were washed with diluted adrenaline (1:25) through same needle. Patients who did not achieve detumescence were treated with cavernospongiosus shunt (Fig. 2). A 2.5cm transverse incision was made on the dorsum of glans penis. Tissues were dissected to reach corpora and a circular incision was made in the tunica albuginea removing 0.5 cm tissue. Corpora were pressed to drain dark red blood through the shunt. Corpora were irrigated with diluted adrenaline solution till clear fluid returned. The incision in the glans was closed with 4/0 polyglycolic acid sutures. Patients were divided into two groups based on the duration of the illness. Group A comprised patients who presented within 48 hours and group B had patients who presented after 48 hours. The relationship between duration of illness and clinical outcome (detumescence and complications) was studied.

## Results

Mean age of the patients was 27, SD 6.69 and range of 10-40 years. Eleven patients were married. There was one paediatric patient. Details of the etiological factors are given in figure 3. Mean duration of illness in group A and B was 25.7 and 129 hours respectively. Seven patients presented within 48 hours (46.7%) and eight came after 48 hours (53.3%). Four patients had been previously treated and then referred to our department while remaining reported directly.

Aspiration and intracavernous injections with adrenaline was successful in seven patients and detumescence was achieved (46.7%). During their follow up they had satisfactory erectile function. Mean duration of illness in these patients was 25.7 hours.

Patients, who did not respond initially to conservative measures, were treated with distal cavernospongiosus shunt. Out of eight patients detumescence was achieved in four patients (50%), among these there was recurrence of priapism in one (25%). Mean duration of illness in this group of patients was 129 hours. On follow up satisfactory erection was reported in 3 patients (37.5%). Details of final outcome are summarized in figure 5. One patient developed urinary fistula.

**Discussion**

Etiological factors of priapism are multiple. Incidence of priapism following intracavernosal injections of vasoactive drugs has gone up because of their extensive use for diagnostic and therapeutic purposes. In our study intracavernosal injection of papavarine was associated with highest incidence of priapism which is comparable with some other studies. In literature 5% incidence of priapism has been reported with papaverine<sup>16</sup>. Chances of developing priapism are only 1% with intracavernosal injection of prostaglandin E1(PGE1)<sup>17</sup>. In our setup papaverine is more frequently used because it is cheaper.

Second commonest cause of priapism in our study was aphrodisiac drugs given by hakeems and quacks. Exact chemical composition of these drugs is not known, however, most of them use heavy metals for ED. In our country many people still think that no potent treatment is available for impotency in allopathy. Similar drugs are also popular in some other parts of the world as well<sup>18</sup>.

Hematological diseases like Thalasaemia, sickle cell disease and leukemia are associated with highest incidence of priapism in many countries<sup>19</sup>. Incidence of these haematological diseases is less in our country. We encountered two patients with priapism due to Thalasaemia during the last 7 years. In spite of thorough investigations incidence of idiopathic priapism may be as high as 60%<sup>1</sup>.

Priapism is a urological emergency. It requires prompt treatment to avoid complications. In our social setup patients usually present late because of embarrassment and ignorance. Other reasons of late presentation are illiteracy and poverty. Many patients develop irreversible damage by the time they reach the doctor. First choice for many patients in smaller towns is traditional healers rather than allopathy. In our study most of the patients with priapism came late which limited success of our management.

Even if patients present late, it is justified to offer surgical treatment as it is the only chance through which they may avoid irreversible damage and ED.

Conservative measures alone were successful in 53.3% patients and addition of surgical shunts in non responders resulted in success in 66.7% which was comparable to another series<sup>16</sup>.



Fig.1 Aspiration of corpora with scalp needle



Fig. 2 Site of distal cavernospongiosus shunt

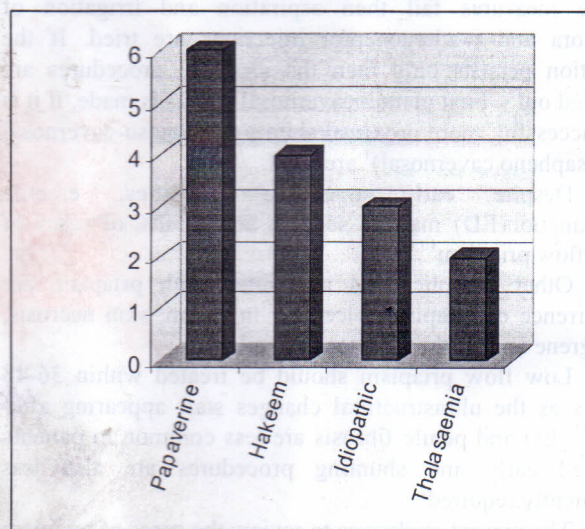


Fig. 3: Etiological factors

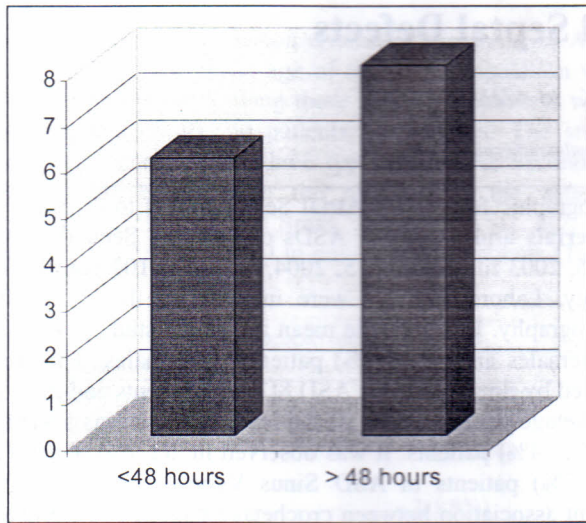


Fig. 4: Duration of priapism

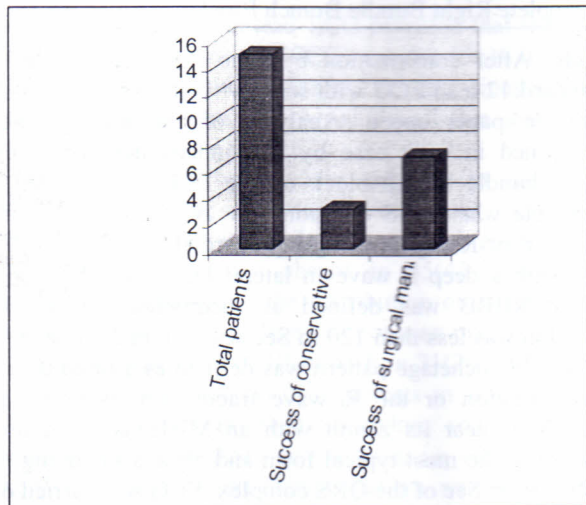


Fig.5: Success of management

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