An erect emergency

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Emergencies can occur at any time and in many incarnations. Are you adequately equipped to deal with them? Each month we present a case study in emergency medicine based on real cases and events. Would you have been able to help this patient?

Another evening shift with a full emergency department. It's the usual Monday evening – lots of admitted patients 'log jammed' (or 'access blocked'), unable to go to ward beds in spite of cancellations of booked admissions.

Everybody is tense and cranky. The senior administrators have been ordering everybody around (often counterproductive) because of the political pressure.

There are several transfers to neighbouring hospitals and nursing homes because there are no postoperative beds. As anyone can easily imagine, having to ring around, persuade patients and relatives, arrange transport and write the necessary letters is a very inefficient and time consuming effort.

The problem

None the less, the triage sister comes into the doctors' room with a serious look but also the mere twinge of a wry smile. 'This patient has just arrived. He has a painful penis', she says. Before any smart interjections can be made, she goes on to tell you that he has an erection that has not gone down since the previous evening. As the atmosphere has been so tense generally, there is no stopping a couple of wisecracks in the room, from both genders. There are still many patients at triage, so the nurse quickly informs you that the patient had taken Viagra and an injection, and then returns to her spot.

The emergency consultant is already looking after a patient who has had a cardiac arrest, and another with a major head injury, so he asks you, an experienced GP with extra knowledge and an interest in women's and sexual health, to go and see the patient as a priority.

As you leave the room, you hear the consultant tell the other staff that your patient is in big trouble, and even with all the right treatment he may end up permanently impotent.

On your way to the cubicle you think back to when erectile impotence was first being seriously treated, usually by injections – there had been a steep learning curve since then. The patients used to come in to the emergency department well after midnight and they were not

Table. Causes and presentation of priapism

Causes

Arterial

Self-injection with prostaglandin or papaverine

Venous

Haematological disorders (e.g. sickle cell trait, leukaemia)

Antipsychotic medication

Neoplasm or trauma

Presentation

Idiopathic

Prolonged painful erection – may be associated with difficulty voiding

Arterial obstruction

Engorged glans

Venous obstruction

Soft glans

Source: Brenner PC. Urological trauma and emergencies. In: Fulde GWO, ed. Emergency medicine: the principles of practice. 3rd ed. Sydney: MacLennan & Petty, 1998: 162.

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Treatment of priapism

- Give oral pseudoephedrine 60 mg in mild cases where self-injection is the cause.
- In more severe cases, insert a 23Fr butterfly into the corpora cavernosa and aspirate 25 to 30 mL blood. Note if the blood is bright red (arterial) or dark (venous stasis).
- Leave the butterfly in.
- If the erection recurs, aspirate a further 25 mL of blood and administer:
  - metaraminol tartrate (Aramine) – take 1 ampoule (10 mg in 1 mL) dilute to 10 mL (i.e. 1 mg/mL) and inject 1 to 2 mg intracavernosally

  or
  - adrenaline 1 mL of 1:10,000 diluted with 9 mL normal saline – give 0.5 mL increments.

Modified from: Brenner PC. Urological trauma and emergencies. In: Fulde GWO, ed. Emergency medicine: the principles of practice. 3rd ed. Sydney: MacLennan & Petty, 1998: 163.

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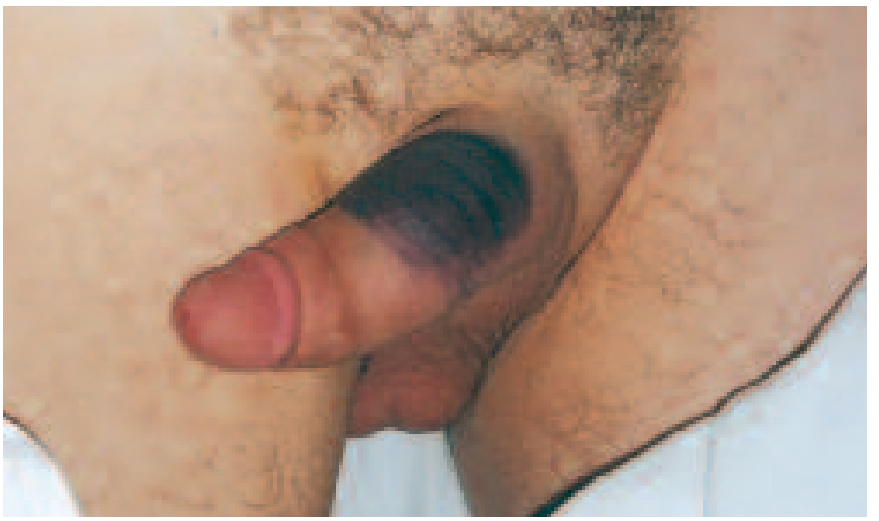

Figure. After treatment, the penis has become a bit flaccid and bruised.

taken that seriously. In the bad old days, there were no senior staff on and no 24-hour emergency medicine registrars, and most patients waited a long time. Not until a few 'stuff ups' and cranky visits, and letters from urologists and patients, did the 'system' become aware that priapism is a real emergency.

So when you talk to the patient, very early in the piece you ask him how much pain he is in, and you organise some morphine and metoclopramide because the pain is severe.

The patient and what he had done

The medical history and examination are those of a 26-year-old businessman who has erectile impotence but is otherwise healthy.

As instructed by his doctor, the patient had taken one sildenafil (Viagra) tablet (50 mg) during the previous evening. An hour later at 9 p.m., when nothing had risen, he decided to inject himself (intracavernosally) with alprostadil (10 µg). He had needed to do this on two previous occasions, without any dramas.

The injection caused an erection. By 10 p.m., all the sexual activity was over. Through the night the erection was very painful.

When asked why he presented only at 8 p.m. the next evening, he very humanly and honestly replied that he thought it would be alright with time.

How it is treated

The causes and differentiation of priapism go through your head (Table). After a quick examination, you commence urgent treatment (see the box on page 118).

In this case, because the erection has been maintained for so long the blood aspirate is dark and some has clotted. With the above treatment, the priapism is only partly relieved.

The urologist is contacted, and he comes in. He explains to the patient that if things have not improved by morning he will need to operate to perform an anastamosis between the corpora in the penis, to give venous drainage. Unfortunately, this brings with it permanent impotence, but it saves the penis.

The next morning the penis has become a bit flaccid (Figure), and an operation is avoided.

Because the condition is different from the usual cardiovascular emergencies, it has gained the attention of many of the medical and nursing staff, reminding them that priapism is a treatable, time-critical emergency. MT

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