

# Late complications of spontaneous urethral erosion of malleable penile prosthesis in a young patient

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**ABSTRACT** While oral agents are currently suggested for the initial treatment of erectile dysfunction, penile prosthesis implantation (malleable or inflatable) is accepted as a third-line therapy if intracorporeal injection and intraurethral treatment fail as a secondary choice. Urethral erosion of the malleable penile prosthesis is a well-known complication, mostly due to the indwelling catheter. We report a case of urethral erosion of the malleable penile prosthesis after 23 years. The patient was a 45-year-old man without any underlying risk factors. He subsequently underwent a unilateral rod extraction under regional anaesthesia. It appears that urethral erosion of penile prostheses can appear at any time post operation, without any known facilitative factors and in any age group. Furthermore, simple office manoeuvres may not be possible in some patients.

*Keywords: complication, erectile dysfunction, penile prosthesis, urethral erosion*  
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## INTRODUCTION

Most men with erectile dysfunction are initially offered systemic therapy with a phosphodiesterase type 5 inhibitor, and then a choice of intracorporeal injection or intraurethral treatment. If these initial treatments fail or are rejected, penile prosthesis implantation is usually the third-line treatment option. The technology for penile prosthesis has been evolving, and it has been in widespread use since the early 1970s.<sup>(1)</sup> Currently, inflatable penile prosthesis, mostly with an antibiotic coating inside the tunica albuginea, is the preferred choice in the United States.<sup>(2)</sup> Malleable penile prostheses are semi-rigid and allow the penis to bend downward for dressing and upward for coitus. They have very low mechanical failure and a relatively lower price compared to inflatable penile prostheses, which is a clear advantage, especially for developing countries such as Turkey. However, there are also some known problems such as constant penile rigidity and an increased risk of erosion.<sup>(1,2)</sup> Urethral erosion of the prosthesis has been reported as a late complication, which may appear any time from several months to 11–20 years after the implantation, mostly due to the indwelling catheter.<sup>(3–5)</sup> We encountered a case of urethral erosion of the malleable penile prosthesis after 23 years in a 45-year-old patient without any underlying risk factors, including those related to indwelling catheters. To our knowledge, this is the latest case of complications due to erosion of the penile prosthesis.

## CASE REPORT

A 45-year-old man presented to our outpatient clinic with complaints that the tip of the penile prosthesis had appeared from the meatus urethra, with associated complaints such as difficult micturition, dysuria and mild pain at the left side of the penis. The patient's medical history revealed that after a perineal



**Fig. 1** Photograph shows the tip of the left-sided penile prosthesis through the fossa navicularis of the meatus urethra.

injury due to a parachute jump during his military duty, he had developed vascular-type erectile dysfunction. Six months after a failed attempt of a vascular procedure, he had undergone a malleable penile prosthesis operation at the age of 22 years. Apart from this, his medical and family history was insignificant. The patient was single and the frequency of coitus was 1–2 per month.

On physical examination, erosion of the left penile prosthesis was demonstrated through the fossa navicularis of the distal urethra, while the right side was safe in an intact corpora cavernosum (Fig. 1). As extraction of the prosthesis could not be managed at the outpatient clinic, the patient was hospitalised. The 24-cm, left-sided malleable penile prosthesis was extracted under regional anaesthesia with a subcoranal incision (Fig. 2). An approximately 45-degree curve deformity was noted on the extracted prosthesis. No erosion was noticed on the contralateral side, and re-implantation was not done for the ipsilateral side at the same session. Although pre-operative urinary culture was negative and there were no findings suggestive of infection in

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**Fig. 2** Photograph shows the extracted 24-cm malleable penile prosthesis with a spontaneous curving deformity, possibly occurring intracorporeally during the past 23 years.

the urethra and the corpus cavernosum peri-operatively, oral fluoroquinolon and anti-inflammatory drugs were prescribed for one week post operation. Except for a small haematoma at the incision site, no postoperative problems were recorded. The patient was discharged on the third day.

## DISCUSSION

Although there have been some reported cases of atypical erosion from the pieces of the penile prosthesis to the neighbouring tissues, such as a reservoir or rod to the bladder and pump tubing erosion to the scrotum or urethra, the most common complication has been rod erosion into the urethra.<sup>(1,6-9)</sup> Indwelling urethral catheters and clean intermittent catheterisation are the most common causes of urethral erosion as well as known penile prosthesis complication. Although a penile prosthesis generally perforates into the urethra, it can also extrude through the glans or corporeal shaft.<sup>(10)</sup> It has been hypothesised that erosion occurs mostly in the region of the fossa navicularis due to compression of the urethra by the prosthesis and the friction produced by the catheter.<sup>(5)</sup> The constant internal pressure of the rod device could be another reason, especially in men with spinal cord injury due to their lack of sensation.<sup>(1)</sup> In our case, spontaneous erosion appeared in the same anatomical location, probably indicating a weak anatomical side. Gacci et al reported a similar spontaneous unilateral rod erosion through the urethra after 20 years in an 84-year-old man who was suffering from vascular and renal insufficiency.<sup>(3)</sup> In another late rod erosion case, a 73-year-old man developed spontaneous erosion 11 years post operation, possibly due to the indwelling urethral catheter.<sup>(5)</sup> We postulate that ageing itself may be a predisposing factor for the above cited cases. However, our patient was only 45 years old and the complication occurred after a period of 23 years. Additionally, there was no

systemic health problems (including ageing) that might result in insufficient tissue strength.

In cases of urethral erosion of the malleable penile prosthesis, the rods protrude from the urethra, and thus, extraction from the urethra as a simple office procedure has been suggested.<sup>(1-3)</sup> However, in our case, simple extraction could not be managed in the outpatient clinic and the patient underwent extraction with a corporotomy under regional anaesthesia. One possible reason for our failed attempt with simple manoeuvres could be that the rod had integrated with the neighbouring tissue in the course of the past two decades. To support this theory, subsequent forced extraction of the prosthesis was required during the procedure at the operating theatre. We did not consider replacement of the prosthesis, as there was a possibility of infection, and the contralateral side was intact. One-sided intact rods have been reported to be sufficient for adequate coitus.<sup>(1)</sup> The extracted prosthesis had a spontaneous bending deformity at about 45 degrees, which could be due to the deterioration of the prosthetic material. Interestingly, the patient did not mention any sexual problem associated with it.

To conclude, clinicians should be aware that urethral erosion of penile prostheses can present any time post operation, even without any known facilitative factors, and in any age group. Furthermore, simple office manoeuvres, as previously suggested, may not be possible in some cases.

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