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Case report

Simple procedure gone awry: Urethro-venous intravasation during urethrography



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KEYWORDS

Urethro-venous intravasation;
Extravasation;
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Abstract

Retrograde urethrography is a procedure used to evaluate urethral strictures. Urethro-venous intravasation, rarely seen during retrograde urethrography, can result in bacteremia, adverse reactions to contrast agents, renal failure and even pulmonary embolism. We report one such case of a male patient who developed bacteremic shock following urethrography.

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Case report

A 60-year-old male patient presented to the emergency department with features of septicemia hours after having undergone retrograde urethrography. Two weeks prior to retrograde urethrography, he had presented with urinary retention. At that time, a suprapubic catheter had been placed after a failed attempt at catheterization.

Apart from a proximal urethral stricture, the urethrogram also showed the penile venous anatomy, indicating urethro-venous intravasation of contrast media (Fig. 1). The patient was stabilised and treated with broad-spectrum antibiotics and inotropic support.

He recovered sufficiently to undergo definitive endoscopic urethrotomy two weeks after the urethrogram.

Discussion

Visualisation of the veins draining the penis, otherwise defined as urethro-venous intravasation, is a rare finding on retrograde urethrography. Although some cases have been reported in the literature, the exact incidence is not known.

Urethro-venous intravasation may occur due to violation of the urothelium when the contrast agent is injected under great pressure into a closed, inflamed urethra. Uropathogens may enter the circulation along with the contrast media, which can result in bacteremia or, even worse, in sepsis [1,2]. Other consequences of urethro-venous intravasation may be allergic reactions to contrast media [3], contrast nephropathy and even pulmonary embolism [4] when oil-based contrast media are used.

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Figure 1 Retrograde Urethrogram showing – 1: deep dorsal vein of the penis; 2: circumflex veins; 3: stricture of the penobulbar urethra.

A number of alternative investigations and preventive measures have been suggested to eliminate this dreaded, though uncommon, complication of a simple radiological investigation. Covering the procedure with parenteral antibiotics, gravity injection or injection of the contrast agent at low pressure are among the measures used to circumvent the complication. Sonourethrography and MR-urethrography with water injection are suggested as alternatives to the retrograde urethrogram using injection of contrast medium.

Conclusion

Urethro-venous intravasation is an uncommon finding on retrograde urethrogram, rarely resulting in dreaded complications. We recommend that the procedure be done under antibiotic cover and that the contrast medium be injected under low pressure.

Conflict of interest

None declared.

Consent

A written, informed consent was taken from the patient to share his case details.

References

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