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Case Report

Fournier's gangrene following retrograde urethrography: a rare complication

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ABSTRACT

Retrograde urethrography (RGU) is a useful investigation to look for urethral injuries. It can result in various complications like anaphylaxis due to contrast material, urinary tract infection and intravasation or extravasation of contrast. In this case report, a rare complication of RGU was seen in the form of Fournier's gangrene. This complication was probably due to extravasation of contrast material during the procedure which lead to reactionary changes of the penile skin and scrotum. Patient was managed aggressively and had a good recovery and is on regular follow up.

Keywords: Retrograde urethrography, Continence, Fournier's gangrene, Lower urinary tract symptoms, Contrast

INTRODUCTION

Retrograde urethrography (RGU) is a modality of choice for urethral imagining. It remains the gold standard for diagnosis and staging of urethral diseases.[1] Complications associated with this study is relatively uncommon and include mild patient discomfort, urinary tract infections, and contrast related anaphylaxis. There is also a significant risk of radiation exposure associated with this exposure.[2] Here we present an unusual case where Fournier's gangrene was seen as a complication of the procedure mentioned above.

CASE REPORT

A 54-year-old male admitted with complaints of obstructive Lower urinary tract symptoms for further evaluation. The patient had no comorbidities and general examination was normal. The patient did not have any previous history of urological procedures or instrumentation. On examination, he was found to have meatal stenosis with features of Balanitis xerotica obliterans. Uroflowmetry was done, which showed suggestive of fixed outflow obstructive pattern. Urine culture and sensitivity did not show any growth. He was planned for RGU to evaluate the urethra. During the procedure, there was extravasation of contrast following which patient developed severe reactionary swelling of the penile skin and scrotum which progressed to features of Fournier's gangrene of the penile skin and the scrotal skin the following day. The patient was started on broad-spectrum antibiotics. He underwent emergency suprapubic catheterization with extensive debridement of the infected skin. Daily dressings were done, and the medications were continued according to the culture report. The wound started granulating, and the patient was discharged on postoperative day 10 with advice to continue wound care from a primary health center. Patient came after one month to follow up with completely healed wound when the catheter was removed

after meatal dilatation. Patient voided well after suprapubic catheter removal. Hence no further intervention was done.

Figure 1: RGU which shows extravasation of contrast material into the scrotum.

Figure 2: Fournier's gangrene of the penile skin and the scrotum.

DISCUSSION

RGU is a valuable diagnostic aid of lesions in the urethra. It is used for evaluating traumatic injuries, urethral strictures, and inflammatory diseases of the male urethra. The study begins with a scout film being taken to assess the bony landmarks as well as to look for any presence of any calcified urinary tract pathology. Subsequently, 20-30 ml of water-soluble iodine-based contrast medium injected into the urethra under the direct radiographic or fluoroscopic vision, and multiple images are obtained.[2] History of instrumentation in the past week should be ruled out before starting the procedure. History of previous allergy history to the contrast medium should be elicited.

Complications following RGU can be due to the anesthesia, technique related, or contrast related.[3] The known complications of RGU are the introduction of infection, damage to the urethra, or contrast hypersensitivity. Complications like intravasation or extravasation of contrast have been reported earlier. This increases the risk of bacteraemia, sepsis, and contrast reactions.

Fournier's gangrene after RGU is a rare complication and can be attributed to extravasation of contrast material during the procedure into the scrotum and penis with subsequent infection caused due to dormant/active organisms in the urethra.[3,4] In our case, the patient probably developed extravasation of contrast material due to high-pressure injection of the contrast material which could have been avoided. Infection occurred due to extravasation of contrast into the scrotal skin, allowing the bacterial flora to come in contact leading to Fournier's gangrene.[5,6] Prompt identification of the complication with aggressive debridement and urinary diversion led to resolution of the problem without long term sequelae.

CONCLUSION

In this study, Fournier's gangrene of the penile skin and scrotum can be concluded to be contributed to the high pressure of the contrast material while performing RGU.

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