CASE REPORT

Acute urinary retention and constipation precipitated by herpes zoster infection

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SUMMARY

A 76-year-old man presented to the emergency department complaining of acute urinary retention (AUR) and severe constipation. His recent medical history included 4 days of treatment in the community for gluteal herpes zoster with famciclovir. A transurethral catheter was passed and the patient completed a full course of famciclovir with resolution of constipation. The patient's catheter was successfully removed 3 weeks after his presentation. We report on the clinical presentation and management of an unusual case of AUR and constipation caused by a zoster viral infection of the S2–S4 dermatome.

BACKGROUND

Herpes zoster is a common viral infection that typically presents with a painful unilateral radicular vesicular rash. The incidence of voiding dysfunction associated with herpes zoster infection is approximately 4%. In this setting, lower urinary tract symptoms are caused by herpes zoster-associated neuritis, cystitis or myelitis. Transient acute urinary retention (AUR) may occur if the lumbosacral dermatome is involved, with complete resolution of symptoms once the infection has been treated.¹ Herpes zoster-associated constipation is a rarer phenomenon and also tends to resolve once the zoster infection has been appropriately treated.² It is important that clinicians are aware of the potential urological and gastrointestinal complications associated with herpes zoster infection to ensure prompt and appropriate management.

CASE PRESENTATION

A 76-year-old man presented to the emergency department with AUR and severe constipation. He had presented to his general practitioner (GP) 4 days previously with a painful vesicular rash on the right buttock and was given the antiviral drug famciclovir. There was no history of preceding lower urinary tract symptoms or constipation. On inspection, a vesicular rash in the S2–S4 distribution over the right buttock was noted (figure 1). Clinical examination of the abdomen demonstrated a painful distended palpable bladder. Digital rectal examination revealed a small benign prostate with normal anal tone. Neurological examination was unremarkable.

INVESTIGATIONS

Routine blood investigations were normal. The serum creatinine was 80 µmol/L, the white cell

Figure 1 Gluteal herpes zoster infection. Vesicular eruption over the right buttock in the S2–S4 dermatome distribution as circled.

count was $6 \times 10^9/L$ and the haemoglobin was 14 g/dL. Midstream urine sample was negative for leucocytes, blood, nitrites and protein, and ultrasonography of the abdomen was normal (figure 2).

DIFFERENTIAL DIAGNOSIS

The differential diagnosis at presentation included AUR secondary to faecal impaction, benign prostatic hyperplasia, urinary tract infection or alcohol. Drug-induced constipation secondary to famciclovir was also considered.

TREATMENT

A 16-French (Fr) transurethral catheter was passed, and 1400 mL of clear urine was drained. Antiviral therapy included 14 days of oral famciclovir 500 mg three times per day.

OUTCOME AND FOLLOW-UP

The patient's catheter was successfully removed after 3 weeks with full resolution of his lower urinary tract symptoms, constipation and vesicular rash. Follow-up cystourethroscopy demonstrated normal urethral and bladder mucosa.

DISCUSSION

Herpes zoster is a viral infection caused by the varicella zoster virus (VZV). It occurs as a result of reactivation of endogenous latent VZV infection within the sensory ganglia. The lifetime incidence of herpes zoster is approximately 30% in the

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Figure 2 Ultrasonography demonstrating the bladder with a transurethral catheter in situ.

developed world.³ Potential sequelae of the virus include visceral neuropathies manifesting as AUR, constipation or pseudo-obstruction.⁴ AUR results from an atonic bladder due to interruption of the detrusor reflex. Constipation can occur simultaneously; however, gastrointestinal manifestations are rare and are due to anal sphincter dysfunction.²

There are fewer than 120 case reports of AUR precipitated by herpes zoster due to the low incidence of sacral dermatomal involvement by VZV.^{5,6} AUR typically occurs at the time of the development of the rash or 1 week later.⁷ Urodynamic studies will demonstrate detrusor areflexia in 100% of patients during the acute phase.⁸ Voiding function returns to normal after 4–6 weeks, and repeat urodynamic studies show resolution of the detrusor areflexia.⁸

In the acute setting, emergency management consists of transurethral catheterisation followed by treatment with appropriate antiviral medications. Herpes zoster-associated AUR and constipation typically follow a benign transient course with complete resolution of symptoms after completion of appropriate antiviral

therapy. Removal of the urinary catheter should not take place until the infection has completely resolved.

Learning points

- ▶ Herpes zoster is a common viral infection with associated urological and gastrointestinal manifestations when the lumbosacral dermatome is involved.
- ▶ Initial management consists of transurethral catheterisation and starting of appropriate antiviral therapy.
- ▶ The urinary catheter should not be removed until the infection has completely resolved.

Contributors EMC collected the data and drafted the report. NFD edited the report. KW carried out supervision.

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REFERENCES

- 1 Chen PH, Hsueh HF, Hong CZ. Herpes zoster-associated voiding dysfunction: a retrospective study and literature review. *Arch Phys Med Rehabil* 2002;83:1624–8.
- 2 Cohen LM, Fowler JF, Owen LG, et al. Urinary retention associated with herpes zoster infection. *Int J Dermatol* 1993;32:24–6.
- 3 Harpaz R, Ortega-Sanchez IR, Seward JF. Advisory Committee on Immunization Practices (ACIP) Centers for Disease Control and Prevention (CDC). Prevention of herpes zoster: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 2008;57:1–30.
- 4 Tribble DR, Church P, Frame JN. Gastrointestinal visceral motor complications of dermatomal herpes zoster: report of two cases and review. *Clin Infect Dis* 1993;17:431–6.
- 5 Broseta E, Osca JM, Morera J, et al. Urological manifestations of herpes zoster. *Eur Urol* 1993;24:244–7.
- 6 Constantian HM. Herpes zoster causing bladder atony. *J Urol* 1969;102:689–92.
- 7 Gibbon N. A case of herpes zoster with involvement of the urinary bladder. *Br J Urol* 1956;28:417–21.
- 8 Yamanishi T, Yasuda K, Sakakibara R, et al. Urinary retention due to herpes virus infections. *Neurolog Urology* 1998;17:613–9.

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