

## A YOUNG MAN WITH LOIN PAIN

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Mr M, a 35-year-old gentleman, presented to the outpatient department requesting investigation for 'kidney stones'. He complained of right loin pain radiating to the front for four days. There was a tingling sensation preceding the episode of pain. It was a continuous nagging pain. He was otherwise well with no significant past medical illnesses. The physical examination of his back revealed skin lesions as shown below.



### Questions

1. What is your diagnosis?
2. What further history would you ask for?
3. What investigations would you offer?
4. What is your management plan?
5. Is there an effective prevention of this condition in older adults?

### Answers

1. The diagnosis is herpes zoster involving lumbar dermatomes L2. The typical vesicular lesions and the pattern of distribution which does not cross the midline allow the diagnosis to be made on clinical ground alone. He was not aware of the rash as it occurred on his back, hence the request for investigation of 'kidney stones'. Pre-herpetic neuralgia, the prodromal pain that occurs one to three days prior to the vesicular eruption, has been misdiagnosed as myocardial infarction,

migraine and renal colic (depending on which dermatome is involved). Although pain is almost invariable, some patients complain of itch or paresthesia as well.

2. He developed herpes zoster at a relatively young age. This should raise a suspicion of underlying pathology. Herpes zoster is more common among those with an underlying immunocompromised state; particularly in those with reduced cell-mediated immunity. This includes those with HIV infection, cancer chemotherapy and organ transplantation. A positive history of high-risk behaviour, e.g. intravenous drug abuse and sexual promiscuity, should be followed up by HIV testing after pre-test counselling. The relative risk of developing herpes zoster infection in HIV infected patients is 15 times higher compared to normal population.<sup>1</sup> Similarly, a history of transplant and cancer should be elicited because careful follow up is then necessary. The infection could worsen in patients with immunocompromised states.
3. A confirmatory test is not necessary as most of these cases can be diagnosed clinically. If one is unsure of the diagnosis as in cases where only very few vesicles are present (this can be confused with herpes simplex), immunofluorescent staining for antigen detection can be done on the swab from the base of the vesicles. Tzanck smear from the base of the vesicles will demonstrate multi-nucleated giant cells but this smear is unable to differentiate it from herpes simplex infection as herpes simplex has a similar cytopathic effect.
4. The aim of treatment is to eliminate the symptoms, shorten the duration of illness and prevent post-herpetic neuralgia. The pain is commonly treated with an analgesic, either a non-steroidal anti-inflammatory or opioid derivatives (e.g. tramadol), although there is not much direct evidence supporting their use.<sup>2</sup> The use of acyclovir and famciclovir is gaining popularity. These antiviral agents shorten the duration of illness and reduce the risk of post-herpetic neuralgia.<sup>3</sup> The risk contributing to post-herpetic neuralgia is increasing age especially in patients who are more than 55 years old.<sup>4</sup> Mr M's risk of post-herpetic neuralgia is low; therefore

the benefit of antiviral therapy is less clear. Furthermore, the onset of illness was four days prior to presentation (the antiviral is most effective within 72 hours). Considering the cost of antiviral therapy, it does not appear to be cost effective for him. Appropriate local treatment of vesicles includes careful attention to hygiene and prevention of secondary infection.

5. Live attenuated varicella zoster vaccination has proven effective in reducing the risk of herpes zoster infection and post-herpetic neuralgia in a large, double-blind randomised control trial involving 38,546 patients aged more than 60 years.<sup>5</sup> Oxman *et al* showed that it reduced the burden of illness due to herpes zoster by 61.1%, post-herpetic neuralgia by 66.5%, and incidence of herpes zoster by 51.3%. It was thought that immunisation of older persons would boost their cell-mediated immunity to the varicella-zoster virus and thereby reduce the risk of herpes zoster and post-herpetic neuralgia. CDC recommends this vaccination to those more than 60 years old.<sup>6</sup> However, in view of his age, this recommendation may not apply.

## References

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### *Clinical diagnosis of herpes zoster has high positive predictive value*

Opstelten W, van Loon AM, Schuller M, van Wijck AJM, van Essen GA, Moons KGM *et al.* Clinical diagnosis of herpes zoster in family practice. *Ann Fam Med.* 2007;5(4):305-9

This is a prospective cross-sectional study of adults age >50 years with clinical diagnosis of herpes zoster identified from family practices in the Netherlands. Serological confirmation of varicella antibodies (IgM, IgA or 2.5-fold rise in IgG antibodies) was made using dried blood spots collected from participating clinics. In 260 patients with clinically diagnosed herpes zoster, 236 were confirmed serologically, giving a positive predictive value of 90.8% (95%CI, 87.3%-94.3%). This study could not determine sensitivity and specificity as only patients with clinically diagnosed herpes zoster were included.