



# Rash and deafness

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A previously well 52 year old homosexual man presented to his general practitioner with a three week history of a rash associated with progressive bilateral hearing loss. There was no fever, photophobia or headache. He had no other relevant medical history and took no medications. During the past three months he had three male sexual partners, all involving oral sex alone. He had not had anal sex during the past year and had not travelled outside of New South Wales.

On examination there was a generalised rash as shown in Figure 1. There was bilateral deafness but an otherwise unremarkable neurological examination. Generalised lymphadenopathy was present. He was afebrile and there was no neck stiffness.

## Question 1

What diagnoses would you consider?

## Question 2

What investigations would you order?

## Question 3

What is the diagnosis?



**Figure 1.** Generalised rash

**The winner of the December Brain teaser is Dr Francis T W Chung, Banksia, NSW**

Answers

Answer 1

In a homosexual man with a rash, syphilis and HIV seroconversion should always be considered. Both of these conditions can involve the central nervous system, causing cranial nerve palsy or meningeal symptoms. The lack of high risk sexual activity (unprotected anal intercourse) would make HIV infection less likely. Viral exanthema can involve the cochlear or meninges producing hearing loss, other symptoms may point to a specific aetiology. Ototoxic medications can cause an acute neural deafness, however, this man had not taken any medications recently.

Answer 2

This man will initially require syphilis and HIV serology and audiometry. If there were signs of meningism immediate referral for lumbar puncture would be indicated. Viral serology could be considered especially if there were other features suggestive of a particular condition.

Answer 3

This man has secondary syphilis. Secondary syphilis is characterised by a generalised maculopapular rash, classically involving the hands and feet. Generalised lymphadenopathy is usually present while other features may include mucocutaneous ulceration and cranial nerve palsies. Syphilis is usually diagnosed serologically. The treponemal tests (TPPA, TPHA, FTA) will be positive in all but very early syphilis while in primary and secondary syphilis the nontreponemal tests (RPR, VDRL) will be reactive indicating active disease. The very high RPR titre in this case (Table 1) confirms the diagnosis as early infectious syphilis while the symptoms and signs assist with disease classification and treatment decisions.

Syphilis is transmitted through contact with infectious lesions including during oral sex. The international epidemiology of syphilis has recently changed. For the past two decades in Australia syphilis has been diagnosed in people with sexual partners from high prevalence regions and indigenous Australians, particularly from remote areas where syphilis remains

endemic. However there have been large outbreaks among homosexually active men in Europe and the United States in recent years with the possibility of similar increases appearing in Australia soon. Most patients with syphilis in the United Kingdom presented to general practitioners and dermatologists, illustrating the need for awareness of syphilis among primary care givers. Few GPs will have managed a case of active syphilis, which may involve prolonged course of intramuscular penicillin. Specialist sexual health service will be able to provide management assistance including the contact tracing of partners. The diagnosis of syphilis in people at risk should be considered to avoid the devastating complications of an otherwise treatable disease.

Table 1. Results of investigations

RPR	1:128
TPHA	reactive
Audiometry	bilateral high tone hearing loss