

# How good at neurology are you?

## ANSWERS

### 1.

Tabes Dorsalis.

The degree of imbalance is out of proportion to the pain and temperature disturbance, which in conjunction with the eye signs, imply this man's problems are most likely due to proprioceptive abnormalities. His pupils are small and slightly irregular. Such pupils display a light-near dissociation. These are the classic Argyll-Robertson pupils commonly seen in Tabes Dorsalis. The VDRL is often normal in tertiary syphilis, in contrast to the TPHA or microhemagglutinin-treponema pallidum test, which is always positive.

#### Further Reading

Carr J (2003) Neurosyphilis. *Practical Neurology*, 2003, 3, 000-000.

Nieman EA (1991) Neurosyphilis yesterday and today. *The Journal of the Royal College of Physicians*, 25, 321-4.

### 2.

This man has tertiary syphilis with aortitis leading to aortic regurgitation and the diastolic murmur. Unusual patterns of altered sensation may be seen in so called Hitzig zones – the central face, around the nipples, medial forearms, lateral legs and perianal area. Lightning pains, particularly in the lower limbs and abdomen, are also described.



Figure 1

Figure 1 is a darkfield image of a *Treponema pallidum* bacterium (x400). Darkfield microscopy involves the illumination of otherwise difficult to see organisms in an oblique manner (courtesy of <http://phil.cdc.gov/Phil/default.asp>).

#### Further Reading

Pugh PJ, Grech ED (2002) Images in clinical medicine. Syphilitic aortitis. *New England Journal of Medicine*, 28, 67.

### 3.

- 1 Orbital branches of anterior cerebral artery
- 2 Orbital branches of middle cerebral artery
- 3 Orbital sulci and gyri
- 4 Olfactory bulb
- 5 Olfactory tract
- 6 Straight gyrus
- 7 Olfactory trigone
- 8 Anterior communicating artery
- 9 Anterior cerebral artery
- 10 Middle cerebral artery
- 11 Internal carotid artery
- 12 Optic chiasm
- 13 Posterior communicating artery
- 14 Infundibulum
- 15 Posterior cerebral artery
- 16 Oculomotor nerve
- 17 Superior cerebellar artery
- 18 Parahippocampal gyrus
- 19 Medial occipitotemporal gyrus
- 20 Occipitotemporal sulcus
- 21 Lateral occipitotemporal gyrus
- 22 Pontine branch of basilar artery
- 23 Trigeminal nerve
- 24 Basilar artery
- 25 Labyrinthine artery
- 26 Abducens nerve
- 27 Vestibulocochlear nerve
- 28 Facial nerve
- 29 Anterior inferior cerebellar artery
- 30 Flocculus
- 31 Posterior inferior cerebellar artery
- 32 Right vertebral artery
- 33 Anterior spinal artery
- 34 Ventral rootlets of 1st cervical nerve