

## A MAN WITH FEBRILE ILLNESS AND DIFFICULTY IN WALKING

E Das Gupta FRCP, International Medical University, Seremban, Malaysia

**Address for correspondence:** Associate Professor Esha Das Gupta, International Medical University, Jalan Rasah, 70300 Seremban, Negeri Sembilan Darul Khusus, Malaysia. Tel: 06-7677798, Fax: 06-7677709, Email: [eshadas\\_gupta@imu.edu.my](mailto:eshadas_gupta@imu.edu.my)

A 39-year-old carpenter complains of difficulty in walking for one week preceded by a history of fever and flu-like symptoms lasting for five days. He did not have any history of a fall and he did not complain of any back pain. The photographs of his legs when the patient was asked to dorsiflex his feet are shown below (Figures 1 and 2).

Figures 1



Figures 2



### Questions

1. What is shown in the photographs?
2. List three differential diagnoses of this condition.
3. What is the most likely cause in this patient?

### Answers

1. Bilateral foot drop.
2. L4/L5 radiculopathy, peripheral neuropathy, and Guillain-Barré syndrome (GBS). Foot drop can be defined as a significant weakness of ankle and toe dorsiflexion. It is usually caused by lower motor neuron pathology, more commonly disruption of conduction from the deep peroneal nerve (L4/L5). L4/L5 radiculopathy is the most common cause of foot drop, usually due to herniated nucleus pulposus or foraminal stenosis. Peripheral neuropathy due to diabetes mellitus, drugs and inflammatory neuropathy (GBS) are other causes of foot drop. Central or upper motor neuron causes are extremely rare (e.g. parasagittal meningioma), but must be considered.
3. Neurological examination of the patient above revealed bilateral motor weakness of the lower limbs. Sensation was intact and the marked feature was areflexia. From these findings Guillain-Barre syndrome was suspected. It was proven by lumbar puncture where cerebrospinal fluid showed albumino-cytological dissociation. GBS is suspected when there are:
  - o Symmetrical limb weakness, typically beginning as proximal lower extremity weakness then ascending to involve the upper extremities, truncal muscles and head,
  - o A lack of deep tendon reflexes (this is a hallmark sign), and
  - o Paraesthesia (which may or may not be present), beginning in the toes and fingertips and progressing upwards to, but generally not extending beyond, the wrists and ankles.

The exact cause of Guillain-Barre syndrome is unknown, but it has been associated with antecedent bacterial and viral infections (*Campylobacter jejuni*, cytomegalovirus, Epstein-Barr virus, *Mycoplasma pneumoniae*), administration of certain vaccinations, and other systemic illnesses.

### Further reading

1. Pritchett JW, Porembski MA. Foot drop. In: E-Medicine. [Online]. 2006. Available from: <http://www.emedicine.com/orthoped/topic389.htm>
2. Goh KJ, Ng WK, Vaithalingam M, et al. A clinical and electrophysiological study of Guillain-Barré syndrome in Malaysia. *Neural J Southeast Asia*. 1999;4:67-72
3. Pritchard J. What's new in Guillain-Barré syndrome? *Practical Neurology*. 2006;6:208-217
4. Miller A, Rashid RM, Sinert R. Guillain-Barré syndrome. In: E-Medicine. [Online]. 2007. Available from: <http://www.emedicine.com/emerg/TOPIC222.HTM>