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## ANTERIOR INTEROSSEOUS MONONEUROPATHY ASSOCIATED WITH HEV INFECTION

### OPEN

Hepatitis E infection has been associated with several neurologic complications, such as Guillain–Barré syndrome, neuralgic amyotrophy, and meningoencephalitis/myelitis.<sup>1</sup> We describe a case of subacute anterior interosseous mononeuropathy associated with acute hepatitis E virus (HEV) infection.

A 25-year-old man without a significant medical history or drug intake consulted because of weakness in the right thumb. The weakness was first noticed by the inability to swipe on his smartphone upon awakening. That day at work, the weakness was particularly troublesome because of the inability to handle a pipette since flexion of the distal phalanx of the right thumb was severely compromised. He had no sensory disturbances. There was no preceding trauma. During the three days before onset of neurologic symptoms the patient experienced mild flu-like symptoms (fever, muscle pain). Clinical investigation at the day of symptom onset revealed isolated paresis (Medical Research Council scale score 2/5) of flexion of the distal phalanx of the right thumb (pincer movement), compatible with a selective weakness of the flexor pollicis longus muscle. Sensory examination was unremarkable, and deep tendon reflexes were normal. Electromyography (EMG) which was performed 6 days after symptom onset revealed a severely decreased recruitment of motor units in the right flexor pollicis longus muscle, indicating dysfunction of the anterior interosseous nerve. Other C8–T1 innervated muscles were normal. Nerve conduction studies were unremarkable. MRI of the right brachial plexus was unremarkable. Biochemical analysis revealed positive HEV immunoglobulin G (IgG) and IgM, but was furthermore completely normal including alanine and aspartate transaminases. HEV RNA was detected in blood with RealStar HEV RT-PCR kit 1.0 (Altona Diagnostics—performed at WIV-ISP). Based on the clinical picture and EMG findings, anterior interosseous neuropathy was considered the most likely diagnosis. However, since peripheral nerve ultrasound or MR neurography has not been performed, the exact localization of neuropathy is unclear. As such, a fascicular motor lesion of the

median nerve trunk cannot be excluded.<sup>2</sup> Because of the positive HEV serology, the patient was treated with intravenous corticosteroids (methylprednisolone 1 g for 3 days). A few days later, the patient had mild pain in the right forearm, yet over the course of several weeks, there was a gradual and total recovery of function in the right thumb.

The most common postinfectious complications of HEV infection are Guillain–Barré syndrome and neuralgic amyotrophy.<sup>3–5</sup> To our knowledge, this patient is the first described to have peripheral mononeuropathy, in particular subacute anterior interosseous mononeuropathy, following an acute HEV infection. Other mononeuropathies associated with HEV infection include facial palsy and vestibular neuritis.<sup>1</sup> As such, this case expands the spectrum of HEV-associated neuropathies and suggests inclusion of HEV serology testing in the diagnostic workup of patients with peripheral mononeuropathy. Since this case merely provides a factual association between HEV and peripheral mononeuropathy, causality needs to be investigated further.

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