



LETTER TO THE EDITOR

[Translated article] Sporadic neuropathy of the peroneal nerve in the knee during the alarm state due to SARS-CoV-2 pandemic



Neuropatía esporádica de nervio peroneal en la rodilla durante el estado de alarma por pandemia SARS-CoV-2

Dear Editor,

We are currently facing an exceptional SARS-CoV-2 pandemic situation that required the confinement of the general population for weeks, with changes in daily habits, a decrease in habitual physical activity and a sedentary lifestyle. Involvement of the external popliteal sciatic nerve (EPSN) or peroneal nerve at the knee is the most common compressive mononeuropathy of the lower extremities^{1–4}. Its aetiology is related to numerous external factors or systemic diseases 1–3, although its sporadic occurrence is less frequent. We present the cases of sporadic peroneal nerve neuropathy seen at the Clinical Neurophysiology Service of the Hospital General de Castellón that occurred during the state of alarm period (from 14th March to 21st June 2020).

Of the patients referred to our service for electromyography (EMG) during 2020, 11 presented with clinical signs of peroneal nerve involvement in the knee without a clear trigger. Seven of them started to develop symptoms during the 14 weeks that the state of alarm remained in force in Spain. One of them showed on MRI a cystic image suggestive of a ganglion that displaced and compressed the EPSN, and was therefore excluded from the study. We therefore analysed 6 cases, 4 men and 2 women, with a mean age of 28.5 years (range 20–49), with no medical history of interest. None of them had suffered recent weight loss or COVID infection. Three of them reported having been sitting with maintained postures (two with legs crossed and one with legs stretched out on a table) for several hours at a time. Clinical examination at the time of the EMG study (one month after onset) showed weakness in dorsiflexion and eversion of the foot of varying severity at that time (from 0 to 4/5 according to the

Medical Research Council), with normal foot inversion and ROTs present in 5 of the patients. Three patients reported clear hypoesthesia in the dorsal region of the foot. One patient had hardly any symptoms as he delayed consultation for 2 months for fear of contagion.

In the EMG study all patients showed focal slowing and moderate-severe peroneal nerve motor conduction block at the knee. Distal peroneal nerve motor amplitudes were found to be mildly-moderately decreased. The distal sensory conduction of the superficial peroneal nerve were altered in 5 patients, with the rest of the sensory and motor nerves explored in the lower limbs being normal. Active denervation was observed in muscles dependent on the common trunk of the peroneal nerve in 5 patients and only in muscles of the deep branch in one, with normality in other muscles dependent on L5. The evolution in all of them was favourable, 3 months later 4 patients presented complete recovery of symptoms and 2 patients showed clear improvement.

Peroneal nerve neuropathy at the knee is the third most common compressive neuropathy after median nerve neuropathy and ulnar neuropathies.¹ It is normally related to numerous external factors (traumas, compressions, tumours, iatrogenesis) and systemic factors (diabetes mellitus, inflammatory diseases, etc.), etc.).^{2–4} Less frequently, sporadic involvement of this nerve can be observed in the knee, usually after prolonged or inadequate posture, especially if there has been significant weight loss.^{1–5} We have not found recent incidence data in the published literature. In our department in 2020, we observed a 50% increase over the previous 3 years. The 6 cases included in our study were mostly young males, with no medical history of interest, and the clinical suspicion was well oriented from the beginning. The EMG study confirmed the suspicion in all of them, ruling out a predisposing polyneuropathy and other possible differential diagnoses, with data compatible with moderate-severe neuroapraxia and mild-moderate secondary axonal degeneration. Three patients reported sustained postures, with a higher than usual number of hours of sitting during confinement.

The worldwide SARS-CoV-2 pandemic has led to a global health crisis with hospital overcrowding, but also loss of employment, inability to perform usual activities, and probably increased sedentary lifestyles for weeks, facilitating compression of this nerve in the knee. We believe it is important to stress the need to maintain proper posture,

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avoiding crossing the legs or resting the knees on hard surfaces for prolonged periods of time, to avoid compression of the peroneal nerve. The EMG study is useful to confirm the diagnosis, exclude other possible causes, typify the injury and give an early prognosis.

Level of evidence

Level of evidence v.

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Conflict of interests

None.

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