

Letter to the Editor

**Distal peripheral nerves may be involved in Parsonage Turner syndrome**Josef Finsterer ^{1*}, Fulvio A Scorza ²¹ MD, PhD. Neurology & Neurophysiology Center, Vienna, Austria² MD. Neurological Department, Federal University of São Paulo (UNIFESP/EPM). São Paulo, Brazil* Corresponding Author: **Josef Finsterer****Article Info****ISSN (online):** 2582-7138**Volume:** 04**Issue:** 02**March-April 2023****Received:** 25-01-2023;**Accepted:** 14-02-2023**Page No:** 16-17**DOI:** <https://doi.org/10.54660/IJMRGE.2023.4.2.16-17>**Keywords:** SARS-CoV-2, plexitis, parsonage turner syndrome, nerve conduction, nerve ultrasound**Introduction**

We read with interest the article by Yamada ^{et al.} reporting on a 58 years-old male with left neuralgic amyotrophy including the shoulder and the forearm with an onset in July 2020, spontaneous, partial remission, and recurrence of symptoms in January 2021 ^[1]. The patient was also investigated by nerve ultrasound. The patient benefited from intravenous immunoglobulins (IVIGs) ^[1]. Incomplete recovery could be achieved after one year of follow-up ^[1]. It was concluded that nerve ultrasound can support the diagnosis of distal neuralgic amyotrophy ^[1]. The study is appealing but raises concerns that should be discussed.

We disagree with the diagnosis “distal form of neuralgic amyotrophy” ^[1]. The patient had not only distal forearm pain but also recurrent left shoulder pain, why the clinical presentation suggests proximal and distal neuralgic amyotrophy, also known as Parsonage Turner syndrome (PTS). Clinically, the patient had left PTS with involvement of the lower cervico-brachial plexus. A limitation of the study is that no investigations of the cerebro-spinal fluid (CSF) had been carried to rule out polyradiculitis or infectious central nervous system (CNS) disease. It is also unclear if the magnetic resonance imaging (MRI) of the left brachial plexus was carried out with or without contrast medium.

We disagree with the statement that PTS is only due to immunological causes ^[1]. PTS is multicausal and can be also due to metabolic, infectious, neoplastic, paraneoplastic, nutritional, and toxic disease ^[2]. The most common causes of PTS are diabetes and alcohol misuse.

PTS is primarily diagnosed upon the history, clinical exam, nerve conduction studies (NCSs), and needle electromyography (EMG) and secondarily by imaging, such as MRI or ultrasound. Clinical exam and EMG may allow differentiation between a plexus lesion and a radicular lesion.

Since the symptoms developed in 7/2020 when the SARS-CoV-2 pandemic was spreading ubiquitously, it is conceivable that the PTS was triggered by a subclinical or mildly symptomatic SARS-CoV-2 infection as previously reported ^[3]. Therefore, we should know if the patient was tested by RT-PCR for SARS-CoV-2 at the time of the onset or if COVID-19 was ever diagnosed. It is unclear what the authors mean with the term “delayed recruitment pattern”.

Do they mean that the interference pattern was not dense at maximal contraction or do they mean that there was an increased threshold of activation?

What were the results of the ultrasound of the left spinal roots C5-7?

Regarding the differentials multifocal motor neuropathy (MMN), and ALS, these two diseases are usually painless. Furthermore, MMN is characterised by multifocal conduction blocks, which were not found in the index patient. Overall, the study carries obvious limitations that require re-evaluation and discussion. Clarifying these weaknesses would strengthen the conclusions and could improve the study. Before attributing shoulder and forearm pain to distal neuralgic amyotrophy, proximal and distal PTS, due to various alternative causes should be ruled out.

Declarations

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