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Original Article

Parsonage–Turner syndrome☆

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ABSTRACT

Objective: To describe the clinical, electrophysiological and imaging findings from Parsonage–Turner syndrome and evaluate the results from conservative treatment.
Methods: Eight cases were studied between February 2010 and February 2012, with a minimum follow-up of one year (mean of 14 months). All the patients answered a clinical questionnaire and underwent functional evaluation using the Constant and Murley score. After clinical suspicion was raised, an electromyography examination was performed to confirm the diagnosis.
Results: Eight patients (mean age of 29 years) were evaluated. The right side was affected in 70% of the cases, and the dominant side in 80% of the cases. All the patients reported that their shoulder pain had started suddenly, lasting from one to five days in six cases and up to 15 days in two cases. In three cases, severe atrophy of the deltoid muscle was observed. Hypotrophy of the supraspinatus and infraspinatus muscles was observed in three cases. A winged scapula was observed in the two remaining cases. Electromyography demonstrated involvement of the long thoracic nerve in these last two cases and confirmed the involvement of the axillary and suprascapular nerves in the remaining six cases. The mean score on the Constant and Murley scale was 96 at the end of the conservative treatment with non-steroidal anti-inflammatory drugs and physiotherapy. Six of the eight patients presented good recovery of muscle strength.
Conclusions: In the majority of the cases, the functional recovery was good, although muscle strength was not completely restored in some of them.

Síndrome de Parsonage–Turner

Palavras-chave:
Neurite do plexo braquial

RESUMO

Objetivo: Descrever os achados clínicos, eletrofisiológicos e de imagem na síndrome de Parsonage–Turner e avaliar os resultados do tratamento conservador.

☆ Work developed at the Traumatology Service, Hospital das Clinicas, Federal University of Pernambuco, Recife, PE, Brazil.

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Métodos: Foram estudados oito casos entre fevereiro de 2010 e fevereiro de 2012, com seguimento mínimo de um ano (média de 14 meses). Todos os pacientes foram submetidos ao questionário clínico e avaliados funcionalmente com o escore de Constant e Murley. Após a suspeita clínica o exame de eletroneuromiografia foi feito para confirmação diagnóstica.
Resultados: Oito pacientes (média de 29 anos) foram avaliados. O lado direito foi acometido em 70% dos casos e era o dominante em 80%. Todos os pacientes relataram um início súbito de dor no ombro, com duração de um a cinco dias em seis casos e de até 15 dias em dois casos. Em três casos foi observada atrofia severa do músculo deltoide. Hipotrofia dos músculos supraespinhal e infraespinhal foi observada em três casos. Escápula alada foi observada em dois casos restantes. A eletromiografia demonstrou envolvimento do nervo torácico longo nesses dois últimos casos e confirmou o envolvimento dos nervos axilar e supraescapular nos seis casos restantes. A pontuação média na escala de Constant e Murley foi de 96 no fim do tratamento conservador com medicamentos anti-inflamatórios não esteroides e fisioterapia. Seis dos oito pacientes apresentaram boa recuperação da força muscular.
Conclusão: Na maioria dos casos a recuperação funcional foi boa, embora a força muscular não tenha sido completamente restaurada em alguns deles.

Introduction

Parsonage–Turner syndrome (PTS) is also named acute idiopathic brachial neuritis, paralytic neuritis of the brachial plexus, cryptogenic brachial neuropathy and scapular belt syndrome. The first records of this syndrome date from 1887, described by Dreschfeld, and this was followed by many other reports: Feinberg[1] (1897), Bramwell and Struthers[2] (1903), Wyburn-Mason[3] (1941), Burnard[4] (1942) and Spillane[5] (1943). However, the clinical characteristics of this syndrome were only fully described in 1948, from a series of 136 cases reported by Parsonage and Turner. These authors named it "scapular belt syndrome".[6]

This is a painful non-traumatic disorder that affects the scapular belt. Clinically, the patient presents a painful condition with localized upsurges in the shoulder that may last for some hours or up to two to three weeks, with spontaneous improvement. After the painful condition, muscle weakness appears, along with paralysis and atrophy of the innervated musculature in the segment affected.[7] Topographically, this neurological lesion impairs the peripheral nerves or part of the brachial plexus. In addition to the motor repercussions, there may be sensory losses.

Diagnosing the disease may give rise to certain anxieties both for the attending physician and for the patient, since some conditions with similar characteristics may be confounded with PTS and may need to be ruled out in making the differential diagnosis. These conditions include rotator cuff tears, calcareous tendinitis, adhesive capsulitis, cervical spondylopathy and neurological abnormalities such as compression of the peripheral nerve, acute poliomyelitis and lateral amyotrophic sclerosis. However, the diagnosis becomes probable when spontaneous improvement of the pain and progression of muscle weakness are observed.

The precise cause is unknown, but it has been attributed in the literature to viral infections and autoimmune processes,[8,9] such as after immunization. There are also reports of hereditary forms with specific mutations[10] or even occurrences after strenuous physical exercise.[11,12] Some viral agents have been correlated with PTS, such as: smallpox, fever, typhoid, influenza, coxsackievirus, parvovirus B19, cytomegalovirus and human immunodeficiency virus, and also *Borrelia burgdorferi*.[8,13–16] There is strong evidence of an association with viral infections, since there are reports in the literature of epidemic outbreaks in isolated populations, such as one that occurred in an indigenous population in the southwestern United States, with eight cases of PTS.[7]

The incidence was found to be 1.64 cases per 100,000 inhabitants, in the population of Minnesota, United States, with occurrences predominantly between the third and seventh decades of life.[17,18] Men are more affected than women, with a ratio of between 2:1 and 11.5:1.[11] The prognosis is good in most cases, given that PTS is self-limiting and has a low recurrence rate.[11] The treatment is generally successful, with use of analgesics and physiotherapy in order to maintain the range of motion and strengthen muscles.

The objective of this study was to describe the clinical characteristics of PTS and evaluate the results from conservative treatment.

Materials and methods

Eight cases of PTS that were diagnosed between February 2010 and February 2012 were studied prospectively. The patients were followed up for a minimum of one year (mean of 14 months). All the patients were asked to answer a clinical questionnaire on their symptoms and underwent a physical examination to assess function. At the end of the treatment, all the patients were graded using the Constant and Murley score.[19]

After the clinical suspicion of PTS was raised, all of these patients underwent electroneuromyography examination in order to register the peripheral nerve that was affected and confirm the diagnosis. However, in some cases, with the aims