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Case Report

Spinal Tuberculosis (Pott's Disease) Detected in a Patient Hospitalized with the Prediagnosis of Guillain Barré Syndrome: Case Report

Guillain Barré Sendromu Ön Tanısıyla Hastaneye Yatırılan Bir Hastada Tespit Edilen Spinal Tüberküloz (Pott Hastalığı): Olgu Sunumu

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ABSTRACT

Guillain-Barré Syndrome is a disease that presents with a progressive clinical course starting with loss of strength in the lower extremities and is challenging to diagnose. It is crucial to make the diagnosis early and not delay treatment to prevent the development of respiratory system involvement. Spinal tuberculosis (Pott's disease), the extrapulmonary involvement of tuberculosis in the vertebrae, may similarly present with loss of strength and sensation in the lower extremities due to spinal symptoms. Here, we presented a 12-year-old girl who presented to our pediatric emergency department with paraparesis.

Keywords: *pott's disease, guillain barre syndrome, paraplegia*

ÖZET

Guillain-Barré Sendromu, alt ekstremitelerde güç kaybı ile başlayan ve progresif şekilde bir klinikle başvuran ve tanı koyması zor olan bir hastalıktır. Tanıyı erken koymak ve tedavide gecikmemek, solunum merkezi tutulumu gelişmesini önlemek açısından oldukça önemlidir. Tüberkülozun ekstrapulmoner olarak vertebrada tutulumuna denilen spinal tüberküloz (Pott Hastalığı) ise benzer bir şekilde spinal semptomlara bağlı alt ekstremitelerde güç ve duyu kaybı ile karşımıza çıkabilir. Burada çocuk acil servisimize paraparezi ile başvuran 12 yaşında bir kız olguyu sunduk.

Keywords: *pott hastalığı, guillain barre sendromu, parapleji*

INTRODUCTION

Guillain-Barré syndrome (GBS) is an acquired immune-inflammatory disorder of the peripheral nervous system. Patients often apply to hospitals with clinical symptoms, such as loss of muscle strength, which starts in the lower extremities and may progress to respiratory center involvement.

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Spinal tuberculosis, also known as Pott's disease, is the clinical picture that occurs due to extrapulmonary involvement of tuberculosis in the vertebrae. Again, it may present with similar symptoms, such as loss of muscle strength and loss of sensation, often due to spinal involvement.

In this case report, a patient who was admitted to our emergency department with paraparesis is described and the importance of making a correct diagnosis was emphasized.

CASE REPORT

A 12-year-old Senegalese girl with no known disease was admitted to İzmir Tepecik Training and Research Hospital Pediatric Emergency Service in Türkiye with the complaint of inability to walk for two days. It was learned that the patient's complaints started one week ago as an imbalance in walking and loss of strength in the legs and gradually progressed. There was no history of recent infection or trauma. According to the examination performed in the pediatric emergency service, the patient had gag reflex and had no abdominal skin reflex. The muscle strength of the patient was 3/5 in the right lower extremity and 1/5 in the left lower extremity. DTRs were taken in the upper extremities but could not be obtained in the lower extremities and Babinski was bilaterally absent. The patient did not have a recent history of upper respiratory tract infection, acute gastroenteritis, or urinary tract infection.

A craniospinal MRI was planned in the emergency department but could not be performed. The patient was admitted to the Pediatric Neurology service with a prediagnosis of Guillain-Barré Syndrome. The COVID PCR test and the COVID IgM-IgG test were negative. Considering GBS in the preliminary diagnosis, 0.4 mg/kg/g 5-day IVIG treatment was started. On the first day of treatment, DTRs in the lower extremities and abdominal skin reflexes were detected in the physical examination.

In the spinal MRI taken on the second day of his hospitalization, a collapse fracture-vertebra plana appearance in the T10 vertebra was observed, and a solid mass reaching 1.5-2 cm at the level of the T9-T11 vertebrae was detected. IVIG was stopped, and neurosurgery was consulted.

Dexamethasone treatment was started for the patient who had signs of compression on the spinal cord, and the operation was planned by the neurosurgeon. After the tuberculosis PCR test sent from the material taken from the mass was positive and the pathology report of the sample was reported to be compatible with tuberculosis, the case was transferred to the Pediatric Infection service with the diagnosis of Pott's Disease. PPD test performed in the patient who was not found to have active pulmonary tuberculosis was positive (15 mm x 15 mm) at 72 hours. Isoniacid, Rifampicin, Ethambutol and Pyrazinamide treatment was started.

After the operation, the patient was followed up for a week as immobile with a corset. The patient was consulted by the physical therapy and rehabilitation department, and mobilization was started. Steroid treatment was gradually reduced and discontinued. The patient was discharged after the tests performed to determine the side effect profile of antituberculosis treatment were normal. The patient did not come to the controls afterward.

DISCUSSION

Pott's disease (tuberculosis spondylitis) is defined as vertebral involvement of extrapulmonary tuberculosis. Due to the insidious course of the disease, timely diagnosis is often delayed. It commonly affects the lower thoracic and upper lumbar regions.(1) Pott's disease is the most common bone infection in tuberculosis and the most common symptom is local pain. Complaints, such as numbness in the waist and legs, decreased muscle strength, night sweats, fever, and weight loss, may also be seen. In some cases, Pott's disease may also cause paraplegia due to damage to the spinal canal by kyphosis. This condition is called Pott's palsy. It may give radiological findings, such as collapse fractures in the affected vertebrae, narrowing of the disc space, kyphosis (typically Gibbus deformity), and abscess in the spine. Pott's disease with the clinical manifestation of paraparesis is rare, and the only definitive treatment is antituberculosis therapy with surgical removal of the space-occupying lesion.

The differential diagnosis of Pott's disease involves distinguishing the symptoms from some other spine diseases. The main ones can be listed as vertebral osteomyelitis, vertebral metastases, disc herniation, discitis, and also some rheumatological diseases, such as reactive arthritis, rheumatoid arthritis and ankylosing spondylitis.

Guillain-Barré syndrome (GBS) is a clinical syndrome characterized by symmetrically progressive polyneuropathy.(2) Two-thirds of patients with GBS have ne–

urological symptoms, such as motor/sensory loss 2-4 weeks after respiratory tract infection or gastrointestinal infection with fever.(3) The acute polyneuropathy of GBS is often triggered by an immune response to a previous infection cross-reacts with shared epitopes on the peripheral nerve. The disease usually manifests clinically with a decrease in DTRs and loss of muscle strength starting from the lower extremities and extending to the upper extremity, face and respiratory muscles. Severe respiratory muscle weakness requiring respiratory support due to bulbar involvement may develop at a rate of 10 to 30 percent.(4)

To our knowledge, there are also studies in the literature in which it is strongly emphasized that Pott's disease should be excluded in the differential diagnosis of patients who presented similarly and were considered for GBS.(5)

As previously shown in the study of Parry O. et al., spinal tuberculosis is involved in 27% of non-traumatic causes of paraplegia and Guillain-Barré Syndrome in 6%.(6) Similarly, in a study conducted in Nigeria, spinal tuberculosis was the most common cause of non-traumatic paraplegia, with a rate of 44.4%, followed by transverse myelitis (13.1%) and GBS (9.1%).(7) As mentioned, GBS has a crucial place in the differential diagnosis of Pott's disease. The craniospinal MR imaging cannot be performed in emergency departments, leading to delayed diagnosis and unnecessary treatment, stands out as a limitation in this case. In conclusion, Guillain-Barré Syndrome and Pott's Disease may appear in clinically similar presentations. In the aforementioned case, it was observed that these two diseases could be clinically similar in the distinction, and it was emphasized that we should definitely consider Pott's disease in the differential diagnosis among our preliminary diagnoses in patients presenting with GBS clinic.

Patient Consent Form / Hasta Onam Formu

The parents' of this patient consent was obtained for this study.

Conflict of Interest / Çıkar Çatışması

The authors declared no conflicts of interest with respect to authorship and/or publication of the article.

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