doi: 10.5505/abantmedj.2015.99609

Abant Medical Journal

Olgu Sunumu / *Case Report*

Volume Cilt 4 *Issue* Sayı 4 *Year* Yıl 2015

Parkinson Hastasında Sakatlığa Neden Olan Multifokal Nöropatik Artropati

Multifocal Neuropathic Arthropathy Causing Disability in Parkinson's Disease

Serpil Tuna[1], Ülkü Uçar[2], Nilüfer Vedin Balcı[1]

[1]Akdeniz Üniversitesi Tıp Fakültesi Hastanesi Fiziksel Tıp Ve Rehabilitasyon Bölümü
[2]Bursa Devlet Hastanesi, Romatoloji Kliniği

Özet

Nöropatik artropati ya da diğer adıyla Charcot eklemi, genellikle periferik sensorial nöropatinin neden olduğu ilerleyici dejeneratif bir artropatidir. Biz burada bir Parkinson hastasında, nadir ve alışılmadık bir durum olarak idiyopatik polinöropatiye sekonder gelişen ve hastayı tekerlekli sandalyeye bağımlı hale getiren multifokal tutulumlu nöropatik artropati olgusu sunduk.

Anahtar Kelimeler: Nöropatik artropati, Charcot eklemi, Polinöropati, Parkinson hastalığı.

Abstract

Neuropathic arthropathy in other words Charcot joint is a progressive degenerating arthropathy which is generally caused by peripheral sensory neuropathy. Here, we present a multifocal neuropathic arthropathy secondary to idiopathic polyneuropathy patient with Parkinson disease as a rare and unusual presentation, who has become wheelchair-dependent.

Keywords: Neuropathic arthropathy, Charcot joint, Polyneuropathy, Parkinson disease.

Introduction

Neuropathic arthropathy in other words Charcot joint is a progressive degenerating arthropathy which is associated with central and/or peripheral nervous system diseases. Generally it is caused by peripheral sensory neuropathy secondary to diabetes mellitus (DM), syringomyelia and syphilis (1, 2). Neuropathic arthropathy usually affects single joint and multifocal arthropathy is uncommon. Weight bearing joints such as ankles and knees can be affected; on the other hand shoulder joint involvement is rare and usually associated with syringomyelia. There are a few cases of bilateral shoulder involvement in the literature (1). However, as far as we access, a case of multifocal neropathic arthropathy with bilateral shoulder and many joint involvements has been reported in the literature.

Here, we present a case of multifocal neropathic arthropathy with bilateral shoulder involvement composed of both athrophic and hypertrophic bony changes secondary to polyneuropathy in a Parkinson disease patient as a rare and unsual presentation.

Case Report

62 year old female patient admitted to our clinic with pain, swelling and tenderness of both knees with progressive inability to walk for about one year. Also she was suffering from pain and spontaneous dislocation of left shoulder. In her past medical history she had hypertension and Parkinson disease for about 13 years. General physical examination was within normal limits. Musculoskeletal system examination revealed swelling, erythema and tenderness of knees. Range of motion of knees and shoulders were limited in all directions. Neurological examination revealed hypoesthesia in the distal portion of extremities.

Laboratory findings were normal except for elevated ESR (100/mm/hour), CRP (5. 26 mg/dl, range: 0.00- 0.50 mg/dl) levels and Vit D3 deficiency (15.42 ng/ml, range: 25-80). Blood cultures were negative. Radiographs of knee and shoulder joints revealed degenerative and destructive changes (Figure 1-2). Bone scintigraphy showed elevated bone marrow activity in bilateral shoulder, knee and left hip region (Figure 3). Electromyography revealed sensory polyneuropahty. No fluid could be obtained with aspiration so crystal formation could not be seen. But according to clinical findings the patient was started on colchisine therapy (1.5 mg/day) orally, and intraarticular steroid injection was done to both knees. Cryotherapy and exercise prescription was also

İletişim Bilgisi / Correspondence
Uzm. Dr. Serpil Tuna, Akdeniz Üniversitesi Tıp Fakültesi Hastanesi Fiziksel Tıp Ve Rehabilitasyon Bölümü.
E-mail: dr.serpiltuna07@hotmail.com

Geliş tarihi / *Received*: 11.07.2014 **Kabul tarihi / Accepted:** 03.09.2014 **Çıkar Çatışması / Conflict of Interest:** Yok / None

added to treatment. At the end of third week of therapy her complaints resolved substantially and she was able to walk with knee braces and limited help.

Discussion

Neuropathic artropathy is a degenerative arthritis associated with central and peripheric nervous system disorders especially DM; tabes dorsalis and syringomyelia (2, 3). While DM patients usually suffer from ankle and knee joint fractures, subluxation and/or dislocation, shoulder and wrist involvement accompany sringomyelia and knee involvement is common in syphilis (1, 4). Neuropathic arthropathy of shoulder is rare (5 % of all cases) and generally secondary to syringomyelia (1, 5). Clinically shoulder involvement is asymmetrical and characterized with moderate pain and rapid destruction of the joint (6).

Two forms of neuropathic arthropathy have been defined. These are known as atrophic or resorptive and hypertrophic or productive forms. Hypertrophic form is usually associated with spinal cord lesions and affects knee, ankle and elbow joints. Atrophic form is seen with peripheral nerve lesions and involves shoulder, ankle and wrist joints (2, 3). On the other hand some authors believe that these two forms are two stages of the same disease in its natural clinical course (7).

Our patient had sensory polyneuropathy and Parkinson disease as a probable factor for neuropathic arthropahy. Involvement of both shoulders and almost complete resorption of left shoulder joint together with hypertrophic changes in bilateral knee and left hip joint represent both forms of the disease. As far we know neuropathic arthropathy together with Parkinson disease has not been reported before. But whether polyneuropathy was the only etiological factor or Parkinson disease aggravated the disease progression is unclear.

Conservative strategies are the first step in the treatment of neuropathic arthropathy. Preservation of range of motion and functional capacity together with prevention of joint destruction are important. Prevention of functional capacity is preferred rather than immobilization especially for shoulder involvement (3). Our patient resolved partially with conservative treatment and exercise prescription.

As a conclusion, neuropathic arthropathy may be multifocal, debilitating and accompany unusual neurological diseases such as Parkinson disease. In addition to investigation of other etiological factors, neuropathic arthropathy should be kept in mind patients with progressive multifocal arthropathy.

References

1. Panagariya A, Sharma AK. Bilateral Charcot arthropathy of shoulder secondary to syringomyelia: An unusual case report. Ann Indian Acad Neurol 2012;15:202-4.
2. Nacir B, Arslan Cebeci S, Cetinkaya E, Karagoz A, Erdem HR. Neuropathic arthropathy progressing with multiple joint involvement in the upper extremity due to syringomyelia and type I Arnold-Chiari malformation. Rheumatol Int 2010;30:979-83.
3. Deirmengian CA, Lee SG, Jupiter JB. Neuropathic arthropathy of the elbow. A report of five cases. J Bone Joint Surg Am 2001;83:839-44.
4. Jones CW, Agolley D, Burns K, Gupta S, Horsley M. Charcot arthropathy presenting with primary bone resorption. Foot (Edinb) 2012;22:258-63.
5. Alai A, Reddy CG, Amrami KK, Spinner RJ. Charcot arthropathy of the shoulder associated with typical and atypical findings. Clin Anat 2013;26:1017-23
6. Mortamais J, Ramain A, Vo Hoang V, Fouque-Aubert A, Ltaief-Boudrigua A, Pialat JB. Neuropathic arthropathy. Answer to the e-quid "A highly damaged shoulder". Diagn Interv Imaging 2013;94:350-4.
7. Jones EA, Manaster BJ, May DA, Disler DG. Neuropathic osteoarthropathy: diagnostic dilemmas and differential diagnosis. Radiographics 2000;20:279-93.