OLGU SUNUMU

A Case With Ataxia, Optic Neuropathy and Polyneuropathy: Is There any Association With İmatinib or Natural Course of Chronic Myeloid Leukemia?

Bir Ataksi, Optik Nöropati ve Polinöropati Olgusu: İmatinib ile İlişkili mi Yoksa Kronik Miyeloid Löseminin Doğal Seyri mi?

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SUMMARY

Imatinib is a tyrosine kinase inhibitor as a antineoplastic agent which is indicated in chronic myeloid leukemia (CML), various hematologic and nonhematologic malignancies. Forty-seven years old male, with CML diagnosis 15 years ago and had stem cell transplantation 2 years ago and receiving radiotherapy and chemotherapy. After then, imatinib 400 mg daily is prescribed on for 12 months by the physician but patient himself continued for 15 months until he suspected drug when he has newly onset walking, swallowing difficulties and blurry vision. Imatinib and possible adverse drug reactions are discussed in the case presentation.

Keywords: Advers, chronic myeloid leukemia, imatinib, optik neuropathy.

ÖZET

İmatinib kronik miyeloid lösemi (KML) ve birçok hematolojik ve nonhematolojik kanser tedavisinde kullanım endikasyonu olan bir tirozin kinaz inhibitörüdür. Bu yazıda, 15 yıl önce KML tanısı almış ve 2 yıl önce kök hücre nakli yapılmış ve radyoterapi ve kemoterapi görmüş 47 yaşındaki erkek hastanın, günde 400 mg imatinib 12 ay süreyle başlanmasından sonra, hastanın 15 ay devam etmesi ve sonrasında yeni başlangıçlı yürüme, yutma güçlüğü ve bulanık görme şikayeti ile başvurusu sunulmuş ve olgu imatinibin olası yan etki reaksiyonları açısından tartışılmıştır.

Anahtar Sözcükler: Yan etki, kronik miyeloid lösemi, imatinib, optik nöropati.

INTRODUCTION

Imatinib is an antineoplastic agent, BCR-ABL tyrosine kinase inhibitor developed in mid1990s (1). It is indicated in chronic myeloid leukemia (CML), various hematologic and nonhematologic malignancies (2). Most frequently reported adverse effects in patients with CML includes superficial edema, nausea, muscle cramps, musculoskeletal pain, diarrhea, rash/skin problems, fatigue, headache, abdominal and joint pain (1). Imatinib has been known also for ophthalmological complications as periorbital edema, epiphora and conjunctival hemorrhage. Sight-threatening complications affecting the optic nerve macula and retina can occur but rarely (3).

CASE REPORT

Forty-seven years old male, with CML diagnosis 15 years ago and had stem cell transplantation 2 years ago and receiving radiotherapy and chemotherapy. After then, imatinib 400 mg daily is prescribed on for 12 months by the physician but patient himself continued for 15 months until he suspected drug when he has newly onset walking, swallowing difficulties and blurry vision. He had two generalized epileptic seizures into same year. His other concomitant medications were tamsulosin 0,4 mg/day, pantoprazole 30 mg/day, and mirtazapine 30 mg/day. After he stopped the imatinib, swallowing difficulty disappeared but weakness in the legs and walking difficulty progressed. In the neurological examination, cerebellar gait ataxia, muscle weakness in the legs (bilaterally 3/5 paresis) and areflexia in lower extremities were detected. No muscle weakness detected upper extremity. He lost 10 percent of his total body weight into three months. His blood chemistry included thyroid, renal and liver function tests were found in normal limits. His electroencephalogram showed that bitemporal neuronal hyperexcitability and levetiracetam was started in a dose of 1000 mg per day. Motor axonal polyneuropathy in the legs were detected in electroneurography. Brain magnetic resonance imaging (MRI) shows non-contrast enhancing patchy and punctuate multiple hiperintense foci in pons, cerebellum, periventricular regions in fluid attenuation inversion recovery (FLAIR) and T2 weighted images. The diffusion-weighted MRI was negative. The ophthalmologic examination shows decreased visual acuity (%20) in the left eye. Optic coherence tomography (OCT) showed retinal nerve fiber layer (RNFL) loss and optic atrophy. The total RNFL mean 84 $\pm$2.3μm, 60$\pm$5.03μm in the right and left eye respectively (Figure 1).

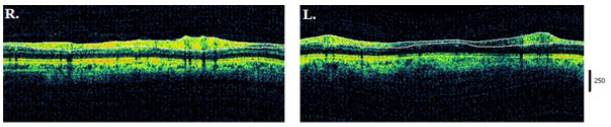

Fig 1. OCT shows retinal nerve fiber layer loss and optic atrophy predominantly in left eye.

DISCUSSION

Imatinib may associated with mild to moderate toxicity, mostly reversible if dose reduction or discontinuation of the drug is available (1). But our patient during treatment lost contact from his physician for 15 months. Jain and Gupta have reported isolated central nervous system blast crises in CML case using imatinib presenting as hypertrophic pachymeningitis and bilateral optic neuritis in 2016 (4). Also they reviewed the clinical details of 23 reported cases of isolated CNS blast crises in CML patients with using imatinib. In their reports 9 cases died despite intrathecal chemotherapy and/or CNS radiotherapy. Other cases could be alive but their neurological involvement minimally regressed. In this case, we did not establish a cerebrospinal fluid analyses for blast crisis. However, our case showed spontaneously recovery after stop taking imatinib into six months follow up. The findings of our case may originate from adverse effect of imatinib or blast crisis of CML in brain. Recovery after cessation of imatinib supported that adverse effect of imatinib. Because of neurological adverse effects are rare in literature, the current case reported is valuable.

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