CASE REPORT OLGU SUNUMU

Allergic reaction due to the use of infliximab infliksimab kullanımına bağlı gelişen alerjik reaksiyon

Hatice Seyma Akca¹, Dilek Atik¹, Fulya Köse¹, Hanife Merve Akca² University of Karamanoglu Mehmet Bey, Karaman Education and Research Hospital, Department of Emergency Medicine, Karaman, Turkey

²University of Karamanoğlu Mehmet Bey, Karaman Education and Research Hospital. Department of Dermatology. Karaman. Turkey

Submitted Date: 07 June 2022, Accepted Date: 04 September 2022

Correspondence: Hatice Seyma Akca

University of Karamanoglu Mehmet Bey, Karaman Education and Research Hospital, Department of Emergency Medicine, Karaman,

Turkey

e-mail: haticeseymaakca@gmail.com

ORCID ID:

HSA 0000-0003-2823-9577 DA 0000-0002-3270-8711 FK 0000-0003-4101-1630 HMA 0000-0001-8280-7470

SUMMARY

In our case report, we aimed to describe a patient who was diagnosed with ankylosing spondylitis and developed anaphylactoid reaction after receiving infliximab treatment for the second time (100 mg). A 21-year-old female patient presented to the emergency department (ED) with an allergic reaction after intravenous infliximab administration. It was learned that he received the treatment for the second time (100 mg). It was observed that the general condition of the patient was moderatepoor, Glasgow Coma Scale (GCS) 15, swelling of the tongue and lips and difficulty in breathing. We were informed that he had ankylosing spondylitis and familial Mediterranean fever in his history and that he was using prednol. In laboratory examinations, White Blood Cell (WBC) was 31,26 KµL. The patient was monitored in the ED. Adrenaline, prednol and avil treatment was given. About 2 hours later, the patient's clinical and vital signs improved. After 12 hours of emergency follow-up, he was discharged with recommendations. Infiximab, which is preferred in autoimmune diseases, should be applied carefully in terms of allergic reactions and close follow-up should be planned, even if no side effects are observed in the first application.

Keywords: Allergy, ankylosing spondylitis, infliximab

ÖZET

Olgu sunumumuzda ankilozan spondilit tanısı ile infliximab tedavisinin 2. dozunu aldıktan sonra anafilaktik reaksiyon gelişen hastayı anlatmayı amaçladık. 21 yaşında kadın hasta intravenöz infliksimab alımı sonrası alerjik reaksiyon ile acil servise (AS) başvurdu. Tedaviyi ikinci dozunu aldığı öğrenildi (100 mg). Genel durum orta-kötü, Glaskow Koma Skalası (GKS) 15 olan hastanın dilde ve dudakta şişmesi olduğu ve nefes almakta zorlandığı gözlendi. Özgeçmişinde ankilozan spondilit ve ailevi akdeniz ateşi olduğu ve prednol kullandığı tarafımıza bildirildi. Labaratuvar tetkiklerinde beyaz küre sayısı (WBC) 31,26 KµL idi. Hasta AS'te monitorize edildi. Adrenalin, prednol ve avil tedavisi verildi. Yaklaşık 2 saat sonra hastanın kliniği ve vital bulguları düzeldi. 12 saat acil servis takibinin ardından önerilerle taburcu edildi. Otoimmun hastalıklarda tercih edilen infiksimab, ilk uygulamada yan etki görülmese bile alerjik reaksiyonlar açısından dikkatli uygulanmalı ve yakın takibi planlanmalıdır.

Anahtar kelimeler: Alerji, ankilozan spondilit, infiliksimab

INTRODUCTION

Ankylosing spondylitis is a chronic autoimmune disease that affects the peripheral and axial skeletal system (1,2). Infliximab is a monoclonal antibody that acts anti-TNF by affecting TNF- α (tumor necrosis factor) and is used in ankylosing spondylitis resistant to nonsteroidal anti-inflammatory drugs (2,3). It is also used in many diseases such as psoriasis, crohn, and Behçet disease (1). In our case report, we aimed to describe a patient who was diagnosed with ankylosing spondylitis and developed anaphylactoid reaction after receiving infliximab treatment for the second time.

CASE REPORT

A 21-year-old female patient presented to the emergency department (ED) with an allergic reaction after intravenous infliximab administration. It was learned that he received the treatment for the second time. It was observed that the general condition of the patient was moderate-poor, GCS:15, swelling of the tongue and lips and difficulty in breathing. We were informed that he had ankylosing spondylitis and familial Mediterranean fever in his history and that he was using prednol (methyl prednisolone, 16 mg tb, for 3 months). Blood pressure (BP): 140/80, pulse: 100/minute, saturation: 93%, respiratory rate: 35/minute. In laboratory examinations, WBC: 31,26 KμL, neutrophil 28,58 KμL, hemoglobin: 10,7 g/dl, hematocrit 32,8%, platelet 405 KµL, C- Reactive Protein (CRP) 22 mg/L, and liver and kidney function tests were normal. The patient was monitored in the ED. Adrenaline 0,1 mg intramuscular (im), methyl prednisolone 60 mg intravenous (iv) and pheniramine hydrogen maleate 50 mg iv treatment was given. About 2 hours later, the patient's clinical and vital signs improved. After 12 hours of emergency follow-up, he was discharged with recommendations.

DISCUSSION

Infliximab is preferred in many autoimmune diseases as well as in ankylosing spondylitis. It has been shown that the remission rate will be around 50%-60% when used in combination with naproxen (4,5). Another study explained the remission rate with infliximab treatment as 22%-23% in patients with ankylosing spondylitis (6). In a study by Moreno et al, 36 patients who were in continuous remission after the discontinuation of infliximab treatment developed relapse in the first year (7). In a study conducted in psoriasis patients, it was observed that infliximab brought the disease under control in a shorter time, although it was not statistically significant (8). There may be effects depending on its use and discontinuation. The development of ventricular arrhythmia due to discontinuation of Infliximab in patients with ankylosing spondylitis (2) and pulmonary tuberculosis due to the use of infliximab in Behçet's disease is also among the reports (9). In our patient, no side effects related to the first use were observed, and an allergic reaction developed in the hospital environment.

The fact that it affects the immune system and is a TNF- α agonist suggested that infliximab may also cause allergic reactions. In a study by Matucci et al, they observed a skin test positivity rate of 30% and showed that severe allergic reactions may occur during the first application of infliximab (10). In a study of Crohn's patients, approximately 6% of 165 patients developed an infusion reaction; 1% of these were considered as serious infusion reactions (11,12).

In our patient, symptoms started 15 minutes after infliximab infusion, and since she was in a hospital setting, she was treated effectively and on time.

CONCLUSION

Infiximab, which is preferred in autoimmune diseases, should be applied carefully in terms of allergic reactions and close follow-up should be planned, even if no side effects are observed in the first application.

Author Contributions: Working Concept/Design: HSA, FK, HMA, Data Collection: HSA, DA, HMA, Data Analysis/Interpretation: HSA, DA, FK, Text Draft: HSA, Critical Review of Content: HSA, FK, DA, HMA, Final Approval and Responsibility: HSA, DA, FK, Supervision: HAS, HMA.

Conflict of Interest: The authors state that there is no conflict of interest regarding this manuscript.

Financial Disclosure: The authors of this study stated that they did not receive any financial support.

REFERENCES

- 1. Papagoras C, Voulgari PV, Drosos AA. Atherosclerosis and cardiovascular disease in the spondyloarthritides, particularly ankylosing spondylitis and psoriatic arthritis. Clin Exp Rheumatol. 2013;31:612-620.
- 2. Özcan ÖU, Özcan DS, Polat CS, Özyüncü N, Erol Ç. Ventricular Arrhythmia With Cessation of Infliximab in a Patient With Ankylosing Spondylitis. Ankara Üniversitesi Tip Fakültesi Mecmuası. 2015;68(2)1-4.
- 3. Maxwell LJ, Zochling J, Boonen A, Singh JA, Veras MM, Tanjong GE, et al. TNF-alpha inhibitors for ankylosing spondylitis. Cochrane Database Syst Rev. 2015;4:CD005468. 4. Sieper J, Lenaerts J, Wollenhaupt J, Rudwaleit M, Mazurov VI, Myasoutova L, et al. All INFAST Investigators. Efficacy and safety of infliximab plus naproxen versus naproxen alone in patients with early, active axial spondyloarthritis: results from the double-blind, placebo-controlled INFAST study, Part 1. Ann Rheum Dis. 2014;73(1):101-107.
- 5. Özer HTE. Treatment decision in a patient with ankylosing spondylitis in remission. Aegean Medical Journal. 2021;49-52.
- 6. Heijde D, Dijkmans B, Geusens P, Sieper J, DeWoody K, Williamson P, et al. Ankylosing Spondylitis Study for

the Evaluation of Recombinant Infliximab Therapy Study Group. Efficacy and safety of infliximab in patients with ankylosing spondylitis: results of a randomized, placebocontrolled trial (ASSERT) Arthritis Rheum. 2005;52(2):582-591.

- 7. Moreno M, Gratacós J, Torrente-Segarra V, Sanmarti R, Morla R, Pontes C, et al. REMINEA study Group. Withdrawal of infliximab therapy in ankylosing spondylitis in persistent clinical remission, results from the REMINEA study. Arthritis Res Ther. 2019;5:21(1):88.
- 8. Şen AP, Onsun N, Küçük ÖS, Cinkaya A. Comparison of Efficiency and Adverse Effects of Etanercept, Infliximab and Adalimumab in Patients with Psoriasis Vulgaris. Turkderm-Turk Arch Dermatol Venereol. 2012;46(1):11-14.
- 9. Özgüneş N, Elbir TZ, Yazıcı S. Pulmonary Tuberculosis Following the Use of Infliximab: A Case Report. Klimik Dergisi. 2010;23(2):70-72.
- 10. Matucci A, Pratesi S, Petroni G, Nencini F, Virgili G, Milla M, et al. Allergologicalin vitroandin vivoevaluation of patients withhypersensitivity reactions to infliximab. Clinical&Experimental Allergy, 2013;(43):659-664.
- 11. Cheifetz A, Smedley M, Martin S, Reiter M, Leone G, Mayer L, et al. The Incidence and Management of Infusion Reactions To Infliximab: A Large Center Experience, American Journal of Gastroenterology. 2003;98(6):1315-1324.
- 12. Lichtenstein L, Ron Y, Kivity S, Ben-Horin S, Israeli E, Fraser GM, et al. Infliximab-Related Infusion Reactions: Systematic Review, Journal of Crohn's and Colitis. 2015;9(9):806-815.