CASE REPORT

Allergic reaction to abciximab with atypical manifestations

Abdulrahman M. Al-Moghairi *, Moheeb A. Abdullah

Riyadh Military Hospital, Prince Sultan Cardiac Centre (PSCC), Adult Cardiology Department, Riyadh 11427, Saudi Arabia

Received 10 November 2010; revised 11 December 2010; accepted 27 December 2010
Available online 6 January 2011

KEYWORDS
Abciximab; Glycoprotein IIb/IIIa inhibitor; Allergic reaction; Coronary intervention

Abstract
Abciximab (ReoPro, Eli Lilly and Company, Indianapolis, Indiana) is an intravenous agent that had been approved for treatment of acute coronary syndrome undergoing coronary interventions. It is a chimeric monoclonal antibody fragment that binds to the glycoprotein IIb/IIIa receptor with a potential for the development of an immune response to variable portions within the antigen binding site following its administration.

We describe a 58-year-old man who developed sudden headache, short of breath, choking and restlessness after receiving Abciximab for coronary intervention. Discontinuation of abciximab and administration of intravenous fluids, steroid and antihistamines led to improvement of his symptoms gradually.

© 2011 King Saud University. Production and hosting by Elsevier B.V. All rights reserved.

1. Introduction

Abciximab (ReoPro, manufactured by Centocor and distributed by Eli Lilly and Company, Indianapolis, Indiana) is an intravenous agent that had been approved by the Food and Drug Administration for treatment of acute coronary syndrome undergoing coronary interventions. It is a chimeric monoclonal antibody fragment (c7E3 Fab) that binds to the glycoprotein IIb/IIIa receptor with a potential for the development of an immune response to variable portions within the antigen binding site following its administration. Anti-abciximab responses are predominantly of the IgG isotope and chimeric antibodies, which have been thought to reduce the risk of hypersensitivity reactions, hence the anaphylaxis is extremely rare (Tcheng et al., 2001). However, there are some reported cases with variable allergic reactions to abciximab with variable severity (Guzzo and Nichols, 1999; Iakovou et al., 2001; Pharrand et al., 2002; Hawkins et al., 2003). The human antichimeric antibodies (HACAs) to abciximab occur in 6–7% of patients after the first exposure (The EPIC investigators, 1994). The re-administration of abciximab can be accomplished without severe allergic responses (Dery et al., 2004).

The previous report of an immunohistological study after an intra-dermal test revealed T-cell mediated reaction (Moneret-Vautrin et al., 2002).

We describe a patient who developed an immediate reaction to abciximab and atypical symptoms compared with previous reports.

* Corresponding author. Mobile: +966 506276861; fax: +966 1 477 8771.
E-mail addresses: aalmonghairi@pscc.med.sa, almoghairi@gmail.com (A.M. Al-Moghairi).

1016-7315 © 2011 King Saud University. Production and hosting by Elsevier B.V. All rights reserved.

Peer review under responsibility of King Saud University.
2. Case report

The suffering 58-year-old man is diabetic, hypertensive and dyslipidemic. He has no prior drug allergy, and underwent coronary bypass surgery four years earlier. He presented with unstable angina. His coronary angiography revealed patent left anterior descending and obtuse marginal artery grafts, with occluded venous graft to occluded native right coronary artery. The decision was made to perform a percutaneous coronary intervention to the native right coronary artery, and the lesion was crossed with an intervention wire with weight-adjusted unfractionated heparin and abciximab (glycoprotein IIb/IIIa inhibitor) bolus ahead of the procedure. The proximal part was pre-dilated and stented successfully with good distal blood flow. A significant distal stenosis was postponed because the patient suddenly became restless, short of breath, with severe headache, throat, neck, and shoulder pains, and he was choking. His lung examination showed scattered rhonchi while his blood pressure was 146/95 mmHg. There was no focal neurological deficit.

We quit the procedure and discontinued the abciximab infusion, and intravenous steroids and antihistamines were given and an urgent Brain Computed tomography was performed to rule out intracranial hemorrhage. The patient was stabilized and the CT brain reported normal. All other laboratory results were normal, including platelets count.

The next day he was discharged home. Four weeks later he was admitted to fix the distal RCA disease and we considered him allergic to abciximab, and the procedure was completed uneventfully using the same contrast and unfractionated heparin without any specific premedication, and next day he was discharged home.

3. Discussion

There are some reported cases with variable allergic reactions to abciximab with variable severity (Guzzo and Nichols, 1999; Iakovou et al., 2001; Pharand et al., 2002; Hawkins et al., 2003). The re-administration of abciximab can be accomplished without severe allergic responses (Dery et al., 2004). The previous report of an immunohistological study after an intra-dermal test revealed a T-cell mediated reaction (Moneret-Vautrin et al., 2002).

Herein we describe a patient who developed severe headache, shoulders pain, choking and shortness of breath shortly after administration of abciximab with elevated blood pressure and absence of neurological localizing signs which had not been described with abciximab before. After discontinuation of the drug and initial resuscitative measures established and exclusion of intracranial hemorrhage by immediate brain computed tomography the drug allergy became the most likely cause. This is confirmed with readmission later to complete revascularization without any events in absence of abciximab.

We applied The Naranjo Algorithm for evaluating the probability of an adverse drug reaction, and we found that this case falls in range of 5–8 score indicating a probable causal relation, as shown in the Table 1 below (Naranjo et al., 1981).

The new finding in this case is the immediate reaction to abciximab and atypical symptoms compared with previous reports where they report angioedema, hypotension and thrombocytopenia, which our patient does not have (Curtis et al., 2004).

References


