Case Report / *Olgu Sunumu*

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Intraperitoneal Hemorrhage in a Peritoneal Dialysis Patient Using Dabigatran: A Case Report

Dabigatran Kullanan Periton Diyalizi Hastasında İntraperitoneal Hemoraji: Olgu Sunumu

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Abstract

Dabigatran is used for the prevention of stroke and systemic embolism in patients with nonvalvular atrial fibrillation. It is still unclear whether the use of dabigatran leads to more bleeding compared with warfarin. In this paper, we present a case of intraperitoneal hemorrhage in a 54-years-old male peritoneal dialysis patient using dabigatran for paroxysmal atrial fibrillation because international normalized ratio level could not be kept at target levels during follow-up. The use of dabigatran in atrial fibrillation has become widespread in recent years. Despite the low risk of intracranial hemorrhage, clinicians should be careful in patients with chronic kidney disease because coagulation monitoring is not possible.

Keywords: Dabigatran, intraperitoneal hemorrhage, peritoneal dialysis

Öz

Dabigatran nonvalvular atriyal fibrilasyon hastalarında inme ve sistemik emboliyi önlenmek için kullanılır. Dabigatranın kullanımının varfarin ile karşılaştırıldığında dabigatranın daha fazla kanamaya yol açıp açmayacağı hala belirsizdir. Bu yazıda 54 yaşında, intraperitoneyal hemoraji ile başvuran, takiplerinde uluslararası normalleştirilmiş oranı düzeyleri istenilen düzeyde tutulamadığından paroksismal atriyal fibrilasyon nedeni ile dabigatran kullanan periton diyalizi hastası sunduk. Atriyal fibrilasyonda dabigatran kullanımı yıllar içinde artış göstermiştir. İntrakraniyal kanama riski az olmasına rağmen kronik böbrek hastalarında koagülasyon takibi yapılamadığından dabigatran kullanırken dikkatli olmalıyız.

Anahtar Sözcükler: Dabigatran, intraperitoneyal hemoraji, periton diyalizi

Introduction

Although warfarin remains the most commonly used drug for preventing thromboembolic events in atrial fibrillation, dabigatran, an oral thrombin inhibitor, has been used for this purpose with increasing popularity in recent years. The Food and Drug Administration approved dabigatran for patients with nonvalvular atrial fibrillation for the prevention of stroke and systemic embolism. In addition, when compared with warfarin, dabigatran has a higher risk of gastrointestinal bleeding but a lower rate of intracranial hemorrhage (1). We present here a peritoneal dialysis patient who had intraperitoneal bleeding after use of dabigatran due to nonvalvular atrial fibrillation.

Case

Our case was a 54-year-old male who had been taken to the peritoneal dialysis program due to diabetic nephropathy for eight years. He had an ischemic stroke in 2008 which was later resolved without sequelae. He was clinically stable and the dialysis adequacy criteria were

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met. He needed hypertonic peritoneal dialysis solutions intermittently. He had again a cerebrovascular ischemic stroke in November 2012. Echocardiographic examination revealed diastolic dysfunction, dilated left atrium (46 mm) and ejection fraction of 50%. Warfarin was given to patient due to suspected paroxysmal atrial fibrillation and two attacks of ischemic stroke. As the international normalized ratio level could not be kept at target levels during follow-up due to noncompliance, dabigatran (150 mg twice a day) was started by a cardiologist in September 2013 without informing the nephrologists.

At the end of the first month of treatment, he was admitted to our unit due to hemorrhagic dialysate for the last three days. Leukocyte count was 0/mm^3 and erythrocyte count was 800/mm^3 in dialysate. Activated partial thromboplastin time (116 sec) and prothrombin time (27 sec) were prolonged. Platelet count was 367.000/mm^3. Hemoglobin level decreased from 10.9 g/dL to 9.4 g/dL. All antiaggregant and anticoagulant medications were stopped and fresh frozen plasma infusion was performed. Hemorrhagic bleeding recovered within two days after the initiation of warfarin treatment.

Discussion

Dabigatran binds specifically to thrombin with high affinity. Dabigatran etexilate is a pro-drug metabolized in the liver and converted to its active form, dabigatran, after oral administration (2). Although coagulation monitoring is not recommended in routine clinical practice, thrombin time and activated partial thromboplastin time have been used in some studies to monitor the anticoagulant effect of dabigatran. However, ecarin clotting time is the best method for determining the risk of bleeding (3). Some studies have reported that bleeding risk is less with dabigatran compared to warfarin while there are contradicting reports (4). On the other hand, there is no antidote for dabigatran. However, a monoclonal antibody fragment, idarucizumab, versus dabigatran has been developed and indicated for reversing the effects of dabigatran in healthy volunteers. A study evaluating its efficacy for reversal of the anticoagulant effects of dabigatran in patients with serious bleeding is currently underway (5). As 80% of dabigatran is excreted by the kidneys, the European Cardiology Association does not recommend its use in patients with a glomerular filtration rate of less than 30 mL/minute (6). Recently, a study has showed that although its use is contraindicated, more dialysis patients are being started on dabigatran (7). There are no studies supporting the benefits outweigh the risks of these drugs in end-stage renal disease patients. Although it is easier to use, physicians should be careful in patients with chronic kidney disease. The use of dabigatran in atrial fibrillation has been increased in recent years in the general population, however, dabigatran should not be used in patients with a glomerular filtration rate below 30 mL/minute.

Ethics

Informed Consent: It was taken.

Peer-review: Internal peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Nilay Şengül Samancı, Egemen Cebeci, Meltem Gürsu, Serhat Karadağ, Savaş Öztürk, Concept: Egemen Cebeci, Ahmet Behlül, Emel Tatlı. Design: Nilay Şengül Samancı, Egemen Cebeci, Abdullah Şumnu. Data Collection or Processing: Leyla Koç, Zeki Aydın. Analysis or Interpretation: Sami Uzun, Savaş Öztürk, Meltem Gürsu. Literature Search: Nilay Şengül Samancı, Egemen Cebeci. Writing: Nilay Şengül Samancı.

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