

RHABDOMYOLYSIS AND ACUTE RENAL FAILURE DUE TO GABAPENTINE USE; CASE REPORT

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ABSTRACT

Gabapentin is an anticonvulsion drug and is used especially in diseases with neuropathic pain. The side effects of gabapentin, whose usage areas are expanding, are pain, drowsiness, fatigue, headache, and muscle twitching are among the most common symptoms.

A 31-year-old male patient was admitted to the emergency service after complaining of pain in all muscles and joint pain for 2 days. The patient with a previous cervical disc herniation was treated with 600 mg gabapentin every 12 hours for 3 days. The patient was conscious, cooperative and oriented well. Respiratory system examination; It was normal. No additional pathology was detected in his neurological and other system examinations. In the blood and urine analysis of the patient; Blood: glucose: 111mg/dl; AST: 20IU/l; ALT: 65 IU/l; bilirubin: 0.8mg/dl; LDH: 2520 U/l; C-reactive protein: 258; CK: 14911 U/l; CKMB: 60.1; creatinine: 7.46 mg/dl; urea: 165mg/dl; Na: 140 mmol/l; K: 3.4 mmol/l; Ca: 5.5mg/dl; pH 7.35; bicarbonate: 19 mmol/l. Hydration and Ca infusion of the patient was started. Forced diuresis was started. Hydration was planned for the patient because the patient had a tendency to decrease in urea and creatinine, had urination and did not have acidosis in blood gas.

In conclusion, we can conclude that gabapentin can cause myotoxicity, rhabdomyolysis and renal failure even in patients with previously normal renal function, even at therapeutic doses. For this reason, we should pay special attention to the drug dosage, concurrently the patient's lifestyle, the drugs he uses and the patient's comorbidities.

Keywords: Gabapentin, Rhabdomyolysis, Renal failure.

INTRODUCTION

Gabapentin is an anticonvulsion drug and is used especially in diseases with neuropathic pain(1). The side effects of gabapentin, whose usage areas are expanding, are pain, drowsiness, fatigue, headache, and muscle twitching are among the most common symptoms (2,3). However, rhabdomyolysis and renal dysfunction may develop among the side effects of the drug (4).

To raise awareness of the importance of monitoring creatine kinase (Ck) and renal function panels and the importance of being vigilant for side effects with each use of this drug, we describe a new case of gabapentin-induced rhabdomyolysis and acute renal failure.

CASE REPORT

A 31-year-old male patient was admitted to the emergency service after complaining of pain in all muscles and joint pain for 2 days. The patient with a previous cervical disc herniation was treated with 600 mg gabapentin every 12 hours for 3 days. Alcohol use continued during the treatment. According to the anamnesis taken from the patient, there was no additional drug used, except for smoking and alcohol use. The patient had no known previous nephrological or urological history. Laboratory tests were performed in the clinic during the tests performed at the hospital fifteen days ago. The tests performed showed that the kidney function was normal (creatinine 0.8mg/dl, urea 27mg/dl, and there was no pathological finding in the urine examination.

In his physical examination, the general condition was good, his fever was not, and his low blood pressure was 120/70. The patient was conscious, cooperative and oriented well. Respiratory system examination; It was normal. No additional pathology was detected in his neurological and other system examinations. In the blood and urine analysis of the patient; Blood: glucose: 111mg/dl; AST: 20IU/l; ALT: 65 IU/l; bilirubin: 0.8mg/dl; LDH: 2520 U/l; C-reactive protein: 258; CK: 14911 U/l; CKMB: 60.1; creatinine: 7.46 mg/dl; urea: 165mg/dl; Na: 140 mmol/l; K: 3.4 mmol/l; Ca: 5.5mg/dl; pH 7.35; bicarbonate: 19 mmol/l. Urine specific gravity 1006; pH 6; proteins +3; glucose +1; ketone bodies: -; leukocytes 4; erythrocytes were 35/ μ l.bld:+3.

In the patient's non-contrast abdominal tomography, both kidneys were in normal localization and size. No dilatation or stone was detected in the bilateral renal collecting system. Cystic lesions were present in both kidneys and there was no ureteral enlargement. Hydration and Ca infusion of the patient was started. Forced diuresis was started. Hydration was planned for the patient because the patient had a tendency to decrease in urea and creatinine, had urination and did not have acidosis in blood gas. Dialysis was not planned in the first place.

DISCUSSION

Rhabdomyolysis is a condition characterized by muscle necrosis and subsequent release of electrolytes, myoglobin, and other sarcoplasmic proteins (AST, ALT, CPK, and LDH) from the muscle cell into the circulation.

Gabapentin toxicity and side effects have been reported, especially among nephrologists and in the literature, such as myoclonic twitches, myopathy, neurotoxicity, etc., especially in dialysis patients. has been fully defined (5,6). Rhabdomyolysis associated with acute renal failure is a rare side effect, but has been described in previous cases (1,7).

The etiology of rhabdomyolysis varies greatly. The most common causes are trauma, intense physical exercise, infections and drugs such as statins, fibrates, neuroleptics, colchicine and proton pump inhibitors, as well as rhabdomyolysis with addictive substances such as cocaine (8,9,10,11).

In conclusion, we can conclude that gabapentin can cause myotoxicity, rhabdomyolysis and renal failure even in patients with previously normal renal function, even at therapeutic doses. For this reason, we should pay special attention to the drug dosage, concurrently the patient's lifestyle, the drugs he uses and the patient's comorbidities.

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