Myocardial infarction, stroke and worsening renal function as a result of ketoprofen intoxication

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Abstract

We present a patient who was referred to the emergency services because she took an unknown quantity of ketoprofen tablets. After approximately 24 hours the patient presents with an acute ischemic stroke, myocardial infarction, and worsening renal function. In our patient, unfortunately, we not measured concentrations of ketoprofen, but given the severity of the clinical picture, we believe that the ketoprofen could certainly contribute to its occurrence.

Key words: ketoprofen, intoxication

Case report

A 65-year-old woman was admitted to the internal intensive care unit (ICU) is unable to establish verbal contact, and difficulty breathing.

That patient is treated for psychosis about 10 years. A year ago two times was treated for spontaneous pneumothorax, and several years ago she was performed left nephrectomy. Detailed medical data could not be obtained. The day before the current hospitalization she was examined in the emergency room for ketoprofen intoxication. That day she was took unknown quantity tablets of ketoprofen (probably about 1500 mg). At presentation her general physical examination was without pathological findings. Arterial pressure was 130/90 mm Hg. The electrocardiogram showed sinus rhythm, 68/min, with nonspecific ST changes. Gastric lavage was not performed. It doubt that it was a suicide attempt, the patient was referred to a psychiatric hospital.

The next day it was impossible to establish verbal contact, and difficulty breathing so she again referred to the emergency service internship and then be admitted to the intensive care unit internship.

Upon admission to the ICU-clinical examination and on the basis of diagnostic work done - sets the diagnosis of acute ischemic stroke and myocardial infarction. The patient had sensorimotor aphasia with plegia of right extremities. Brain CT showed left frontotemporally fresh ischemic lesion size 9x5 cm. High value of troponin (290 µg/l) was accompanied with negative anterolateral T waves with ST segment depression laterally up to 1.5 mm. On admission to ICU creatinine value was 158 µmol/l (the day before the examinations in the emergency departments for suspected intoxication ketoprofen values were normal-109 µmol/l), and over the next five days is monitored by further gradual increase to a maximum of 420 µmol/l. Later, the values of creatinine gradually decreased to 228 µmol/l. Ultrasound of the abdomen that was without pathological findings. During stay in ICU-patient has been normotensive or mild hypertensive (150/90 mm Hg) with normal or elevated levels of central venous pressure (CVP) and without heart rhythm disturbances.
Diuresis has been good all the time. The value of total cholesterol was 4 mmol/l, HDL cholesterol 1.18 mmol/l, LDL cholesterol 2.48 mmol/l and triglycerides 1.77 mmol/l. The tenth day the patient was transferred to the neurology department, and then, after 9 days- in a special hospital for chronic diseases.

Discussion

We present a patient who was referred to the emergency services because she drank an unknown quantity of ketoprofen tablets (probably about 1500 mg). After approximately 24 hours the patient presents an acute ischemic stroke with right sided hemiplegia, aphasia, and probably subacute (troponine 290 μg/l), myocardial infarction without ST elevation. It also registers deterioration of renal function accompanied by increased creatinine.

Patient is likely to exist risk factors for cardiovascular incident (mild unrecognized arterial hypertension) and previous impairment of renal function that was not visible by the easiest method of monitoring (creatinine 109 μmol/l).

Ketoprofen belongs to a group of non-steroidal anti-inflammatory drugs. For nonsteroidal anti-inflammatory drugs worth warning that are associated with increased risk of cardiovascular thrombotic events including heart attack and stroke.\textsuperscript{1,2} Their use can interfere with the cardioprotective effect of acetylsalicylic acid.\textsuperscript{1} Also their applications may worsen renal function, because depending on the dose lead to reduction of prostaglandin synthesis, which reduces the renal flow krvi.\textsuperscript{1,2} So far in the literature did not reveal the simultaneous occurrence of myocardial infarction, ischemic stroke, and worsening renal function in relation to the application of ketoprofen (although individual cases are described myocardial infarction and worsening renal function with frequency less than 1%). There are very few descriptions of overdose or intoxication ketoprofen.\textsuperscript{4}

Conclusion

In our patient, unfortunately, we not measured concentrations of ketoprofen, but given the severity of the clinical picture, we believe that the ketoprofen certainly could contribute to its occurrence.

References

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