Adherence to EBM guidelines in clinical practice

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BACKGROUND: Adequate and rational pharmacotherapy is an important element of rehabilitation of patients with myocardial infarction. Orders of the Ministry of Health of the Russian Federation, domestic and international guidelines, and scientific publications - all contain a complete algorithm for rational pharmacotherapy [1, 2]. These documents are based on the principles of evidence-based medicine (EBM) and help practicing physicians to carry out individualized and rational pharmacotherapy. However, clinical studies have shown low adherence of physicians to clinical guidelines. In the Russian Federation the death rate from cardiovascular diseases is higher than in developed countries. Thus, studies of the causes of high cardiovascular mortality are needed.

OBJECTIVE: To assess adherence of practicing physicians to principles of evidence-based medicine in treating patients after myocardial infarction at the stage of rehabilitation.

METHODS: A retrospective analysis of 157 cases of patients in rehabilitation after myocardial infarction for the years 2006 and 2009 was undertaken.

We analyzed the list of drugs, prescribed to patients during the period of rehabilitation, drug combinations, regimens and pharmacoepidemiological parameters. We used the following rehabilitation criteria: blood pressure control, smoking cessation, and weight control. Recommendations of controlled physical activities have also been studied. Patient care was compared with the guideline recommendations. Statistical analysis was performed using the OLAP system.

RESULTS: 65 patients with myocardial infarction received rehabilitation therapy in 2006, and 92 - in 2009. It was found, that in 2006 physicians prescribed an average of 4.5 drugs per patient, and in 2009 - 4.6 drugs per patient. The average number of cardiovascular drugs (category C of ATC classification) per patient was 2.9 in 2006, and 2.6 – in 2009. Polypharmacy was found in half of the patients.

In terms of evidence-based medicine, an important element in the rehabilitation of patients is smoking cessation and normalization of body weight. Nicotine replacement therapy and prescriptions of drugs for weight loss is one of the strategies to achieve goals. According to our study, drugs for smoking cessation and overweight were not prescribed at all. In terms of evidence-based medicine, the use of beta-blockers and ACE inhibitors for a long time by all patients is an important element of secondary prevention.

The frequency of prescribing of beta-blockers was 86.1% and 91.1 %% in 2006 and 2009 respectively. The frequency of prescribing of subgroup C09 "Agents acting on the renin-angiotensin system (RAAS)" was 67.7% and 44.4% in 2006 and 2009 respectively. Beta-blockers had the highest frequency of use, while the subgroup RAAS drugs were second to them.

We found that the following recommendations of clinical guidelines, based on the principles of evidence-based medicine, were not followed. We found low rates of ACE inhibitors prescribing. The structure of prescribed ACE inhibitors varied in 2006 and 2009. In 2006, 58.4% of all prescriptions were for enalapril. In 2009 enalapril use decreased to 30%, while prescribing of lisinopril increased from 0 in 2006 to 13.3%. Among angiotensin II antagonists (C09C) only losartan was used in 3.1% and 1.1% of cases in 2006 and 2009, respectively. Fixed drug combinations were not used at all.

The proportion of patients who had hypertension was 73.9% and 61.9 %% in 2006 and 2009, respectively. The rate of Antihypertensive use (C02), namely Guanfacine and Moxonidine was less than 2% in both 2006 and 2009.

In accordance with evidence-based principles the strategy for prevention of recurrent myocardial infarction with prescription of lipid-lowering drugs was used. Lipid-lowering drugs were prescribed to 13.8% of patients in 2006 and to 82.2% of patients in 2009. Doctors used atorvastatin and simvastatin only from the list of drugs of this group. We found that in clinical practice physicians used drugs, not supported by evidence, in particular trimetazidine was frequently used. Antiarrhythmic drugs were not prescribed at all, while part of the patients had arrhythmias. Standards of rehabilitation of patients with myocardial infarction do not contain a section on pharmacotherapy and could not be used for quality assessment.

CONCLUSIONS: Pharmacotherapy of patients aimed at secondary prevention of myocardial infarction did not fully conform to the principles of evidence-based medicine. Standards for rehabilitation after myocardial infarction require revision based on existing clinical guidelines and evidence-based medicine.

Keywords: Adhearance, guidelines, myocardial infarction, rehabilitation

References

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