Sažetak sa skupa

Medikamentozno liječenje akutnog koronarnog sindroma (peroralna terapija)

Početni terapijski pristup bolesniku s akutnim koronarnim sindromom bitno se ne razlikuje, radi li se o nestabilnoj angini pektoris, srčanom infarktu bez elevacije ST-segmenta (NSTEMI, prema engl. *non-ST-segment elevation myocardial infarction*) ili srčanom infarktu s elevacijom ST-segmenta (STEMI, *prema engl. ST-segment elevation myocardial infarction*). Treba ipak naglasiti da je reperfuzijska terapija fibrinolizom ograničena isključivo na STEMI infarkt, a kod bolesnika s NSTEMI infarktom nije učinkovita i štoviše može biti štetna.

Kod doziranja lijekova treba se obratiti pažnja na životnu dob bolesnika, posebice zbog činjenice da se lijekovi izlučuju putem bubrega, međutim prilagodba nije potrebna kod dvojne antiagregacijske terapije acetilsalicilnom kiselinom (ASK) i klopidogrelom.

Meeting abstract

Pharmalogical treatment of acute coronary syndrome (oral therapy)

Vjeran Nikolić Heitzler
Clinical Hospital Sestre milosrdnice, Zagreb

The initial therapeutic approach to a patient with acute coronary syndrome (ASC) is similar regardless unstable angina pectoris, non-ST-segment elevation myocardial infarction (NSTEMI) or ST-segment elevation myocardial infarction (STEMI). It has to be emphasized that the reperfusion therapy by fibrinolysis is limited by exclusively to STEMI, and in patients with NSTEMI it is not efficient and what is more, it can be harmful.

When dosing medications, attention needs to be paid to the age of patients, especially due to the fact that medications are secreted through kidneys, however, adaptation is not necessary with dual antiaggregation therapy with aspirin and clopidogrel.

Aiming to ease pains, besides oxygen, a patient needs to be sublingually prescribed nitroglycerin as requested even up to three times consequently. Should the pain fail

U cilju ublažavanja bolova, pored kisika bolesniku se odmah treba sublingvalno ordinirati nitroglicerin po potrebi i do tri puta uzastopce. Ukoliko bol ne prestaje, ili se registriraju hipertenzivne vrijednosti arterijskog tlaka ili pak postoje znaci srčane insuficijencije prelazi se na intravensku (i.v.) primjenu, koja se može nastaviti tijekom idućih 24-48 sati. Nitrati mogu biti potencijalno opasni ako se primjene kod bolesnika s infarktom desnog srca ili kod pacijenata s aortnom stenozom, a u pravilu ih se ne smije davati kod vrijednosti sistoličkog tlaka 100 mmHg ili niže. U početnoj fazi bolesti, pri daljnjem terapijskom algoritmu, i.v. morfin je lijek izbora, opet poštujući pravilo da vrijednosti sistoličkog tlaka trebaju biti iznad 100 mmHg. Ono što se često nedostatno koristi su beta-blokatori koji po recentnim smjernicama Europskog i Američkog kardiološkog društva imaju svoje opravdanje i u inicijalnoj fazi liječenja, tijekom prvih 24 sata. Neophodno je da su bolesnici pri tome hemodinamski stabilni. U liječnika s većim iskustvom preporučuju se i u i.v. obliku, naročito u bolesnika s rastućom anginoznom boli, hipertenzijom i tahikardijom, ali bez znakova srčane insuficijencije. Naravno, radi se o kardioselektivnim beta-blokatorima (metoprolol, atenolol i.v. i bisoprolol) koji se u nastavku liječenja u stabilnih bolesnika koriste u peroralnom obliku pažljivo titrirajući dozu (npr. početna doza atenolola 12,5 mg, bisoprolola 1,25 mg).

U ranoj fazi akutnog koronarnog sindroma, da se spriječi progresija trombotskog zbivanja ili embolizacija s ulceriranog plaka, terapija izbora je dvojna antiagregacijska medikacija. Svi bolesnici dobivaju ASK, u našim uvjetima u dozi od 100 mg, prvu dozu od 300 mg trebaju sažvakati. Danas su našem tržištu prisutni preparati s minimalnim utjecajem na sluznicu želuca i stoga rjeđim gastrointestinalnim nuspojavama. U slučaju da pacijent ne podnosi ASK započinje se samo klopidogrelom. U svakodnevnoj praksi na osnovu brojnih kliničkih pozitivnih dokaza neposredno po ASK ordinira se klopidogrel. U bolesnika koji nisu predviđeni za ranu koronarografiju klopidogrel se ordinira u dozi zasićenja od 300 mg na koju se nadovezuje doza održavanja od 75 mg dnevno. U slučaju potrebe za hitnom invazivnom kardiološkom procedurom doza zasićenja je 600 mg. Ovako odjednom uzeti klopidogrel ostvaruje maksimalni učinak već nakon 2 do 3 sata, za razliku od 300 mg koji počinje značajno djelovati tek nakon 12 sati. Posljednje vrijeme se uvelike susrećemo s pojmom rezistencije na klopidogrel, međutim povećanjem uobičajene doze održavanja sa 75 na 150 mg (2 tbl) rezistencija se s okvirno spominjanih 30% bolesnika smanjuje na svega 12%.

Pored statina, o kojima će drugdje biti riječi, lijek koji nikako ne smijemo zaboraviti su ACE inhibitori, odnosno ako ih bolesnik ne tolerira (najčešće kašalj), blokatori angiotenzinskih receptora. Povoljno djelovanje ACE inhibitora u bolesnika s akutnim infarktom miokarda primarno se objašnjava njihovom ulogom u usporavanju, odnosno zaustavljanju učinka postinfarktne remodelacije miokarda posebice u bolesnika s prednjim infarktom, odnosno smanjenom istisnom frakcijom lijevog ventrikula <40% i srčanom insuficijencijom. Postavlja se pitanje koji ACE inhibitor upotrijebiti u srčanom infarktu, jesu li svi podjednako djelotvorni, odnosno postoji li učinak skupine? Odgovor na to pitanje su dale metaanalize koje su potvrdile da prednost trebamo dati trećoj lipofilnoj generaciji ACE inhibitora (ramipril, trandolapril, perindopril) s dobrim prodorom u

to stop or should hypertensive values of blood pressure be registered or should there be any signs of heart failure, the intravenous (i.v.) application is to be used, that may be continued during the next 24-48 hours. Nitrates can be potentially dangerous if they are applied with patients with infarction of the right ventricle or with patients with aortic stenosis, and in principle, they are not to be administered with values of systolic pressure of 100 mmHg or lower. In the initial stage of the disease in further therapeutic algorithm, i.v. morphine is the drug of choice, again adhering to the rule that the values of the systolic pressure need to be above 100 mmHg. The agents drugs that are insufficiently used are beta-blockers that according to recent guidelines of the European and American Cardiac Society are reasonably used during the initial stage of treatment, during the first 24 hours. For that purpose, it is necessary that all patients are hemodynamically stable. With regard to better experienced physicians they are recommended even in the i.v. form, especially in patients with rising angina-related pain, hypertension and tachycardia but without any signs of cardiac insufficiency. Of course, cardioselective beta-blockers are concerned (metoprolol, atenolol i.v. and bisoprolol) that in the continuation of treatment in stable patients are used orally carefully administering doses (e.g. the initial dose of atenolol is 12.5 mg, bisoprolol 1.25 mg).

During the early stage of ASC, in order to prevent progression of thrombotic occurrence or embolism from ulcerated plaque, the therapy of choice is the dual antiaggregation medication. All the patients receive aspirin, in our conditions dosing 100 mg, the first dose of 300 mg is to be chewed. Today on our market there are products available with minimum impact on the stomach mucosa and therefore fewer gastrointestinal side-effects. In the event that a patient does not tolerate aspirin, the therapy starts only with clopidogrel. In daily work on the basis of the large number of clinically positive evidence, immediately following aspirin, clopidogrel is administered. The patients that are not envisaged for early coronography, clopidogrel is prescribed in saturation dosage amounting to 300 mg followed by the maintenance dosage amounting to 75 mg a day. In the event of an urgent cardiologic procedure, the saturation dosage is 600 mg. Clopidogrel administered in such a way achieves a maximum effect only after 2-3 hours, unlike the dosage of 300 mg that starts significantly to be effective only after 12 hours. Recently, we are more and more confronted with the term of resistance to clopidogrel, however, by increasing the usual maintenance dosage from 75 to 150 mg (2 tablets), the resistance has approximately decreased from the stated 30% of patients to only 12%.

Besides statins that will be discussed in some other abstract, the drugs that should not be forgotten are ACE inhibitors, or if a patient does not tolerate them, (usually cough) these are angiotensin receptor blockers. A favorable effect of ACE inhibitors in patients with acute myocardial infarction is primarily explained by their role in slowing down, or stopping the effect of post-infarction myocardial remodeling, especially with patients with the anterior infarction, or reduced ejection fraction of the left ventricle <40% and heart failure. We pose a question which ACE inhibitor is to be used in myocardial infarction, whether they are equally effective, or whether there is an effect of the whole group? The answer to this question has been

tkivo miokarda. Prepočuje se rana primjena ACE inhibitora, možda ne nužna u prvih 24 sata, kako bi se izbjegla eventualna popratna hipotenzija. ACE inhibitori se primjenjuju i u nestabilnoj angini i NSTEMI infarktu bolesnika s dijabetesom, srčanom insuficijencijom, istisnom frakcijom lijevog ventrikula <40% i hipertenzijom.

Received: 10th Nov 2008

E-mail: vjeran.nikolic-heitzler@zg.htnet.hr

given by meta-analysis that verified that we should prioritize the third lipophilic generation of ACE inhibitors (ramipril, trandolapril, perindopril) with a good penetration into the myocardial tissue. Early administration of ACE inhibitors is recommended, which is not so urgent during the first 24 hours, as to avoid any potential accompanied hypotension. ACE inhibitors are to be administered even in the event of unstable angina and NSTEMI in diabetic patients, heart failure, ejection fraction of the left ventricle