

Interferencija fibrilacije atrijske s terapijom za zatajivanje srca

Interference of atrial fibrillation with heart failure therapy

 Dubravko Petrač*

Kardiološka poliklinika
Bogdan, Zagreb, Hrvatska

Cardiology Polyclinic Bogdan,
Zagreb, Croatia

KLJUČNE RIJEČI: fibrilacija atrijske, zatajivanje srca, beta-blokatori, resinkronizacijska terapija srca, ugrađeni kardioverter defibrilator.

KEYWORDS: atrial fibrillation, heart failure, beta-blockers, cardiac resynchronization therapy, implantable cardioverter defibrillator.

CITATION: *Cardiol Croat.* 2018;13(11-12):337. | <https://doi.org/10.15836/ccar2018.337>

***ADDRESS FOR CORRESPONDENCE:** Dubravko Petrač, Kardiološka poliklinika Bogdan, Bužanova 4, HR-10000 Zagreb, Croatia. / Phone: +385-1-4823-782 / E-mail: d.petrac@inet.hr

ORCID: Dubravko Petrač, <https://orcid.org/0000-0003-2623-1475>

Fibrilacija atrijske (FA) može interferirati s nekoliko terapijskih izbora za zatajivanje srca (ZS): beta-blokatorima (BB), resinkronizacijskom terapijom srca (CRT) i ugrađenim kardioverter defibrilatorom (ICD).

FA i BB u ZS. Dvije meta-analize randomiziranih ispitivanja, koja su usporedila BB s placebom u bolesnika sa ZS, našle su da BB značajno smanjuju smrtnost u bolesnika sa ZS i sinusnim ritmom (SR), ali ne i u bolesnika sa ZS i FA. S druge strane, podaci iz Švedskog registra za ZS i Danskog registra za FA pokazali su da BB mogu smanjiti smrtnost u bolesnika sa ZS i FA. Daljnja su ispitivanja potrebna da razjasne djelovanje BB u bolesnika sa ZS i FA i riješe ove kontradiktorne rezultate. U međuvremenu, BB ostaju standardna terapija za sve bolesnika sa ZS i smanjenom ejeckijskom frakcijom, bez obzira na poremećaj ritma.¹

FA i CRT. FA je često prisutan u bolesnika sa CRT-om i može interferirati s biventrikularnom stimulacijom (BVP). Kada se provodi na ventrikule s R-R intervalom sličnim ili kraćim od frekvencije stimulacije, FA sprječava djelomično ili kompletno BVP i smanjuje dostavu CRT-a. BVP > 98% prijelomna je točka za dobit u preživljavanju bolesnika sa SR i bolesnika s FA. U studiji od 54.019 bolesnika sa CRT-defibrilatorom, prisutnost FA i BVP < 98% bila je povezana s povećanim rizikom od smrti. Liječenje FA u bolesnika sa CRT-om ovisi o tipu FA. Kateterska ablacija FA superiorna je amiodaronu u bolesnika s paroksizmalnom ili perzistentnom FA, a ablacija AV čvora lijekovima za kontrolu frekvencije u bolesnika s trajnom FA.²

FA i ICD. FA može interferirati s terapijom ICD-a na dva načina: a) izazivanjem neadekvatnog šoka kada njezina brza frekvencija ventrikula dosegne programiranu zonu za detekciju VT/VF, i b) trigeriranjem epizoda VT/VF i posljedične adekvatne terapije aparata. FA je najčešći mehanizam za neadekvatne šokove u bolesnika s ICD-om. Bolesnici koji dobivaju adekvatne ili neadekvatne šokove imaju značajno veći rizik od smrti nego bolesnici koji ne dobivaju takve šokove. Rizik koji je vezan uz neadekvatne šokove ograničen je na bolesnike koji dobivaju šokove zbog FA.³ Za smanjenje tog rizika potrebno je primjereno koristiti zonu detekcije, razmotriti zonu monitoriranja za sporu VT, osigurati adekvatnu kontrolu frekvencije ili ritma FA, i uključiti specifične algoritme za razlikovanje FA.

Atrial fibrillation (AF) may interfere with several therapeutic options for heart failure (HF): beta-blockers (BB), cardiac resynchronization therapy (CRT) and implantable cardioverter defibrillator (ICD).

AF and BB in HF. Two meta-analyses of randomized trials, that compared BB with placebo in HF patients, found that BB significantly reduced mortality in HF patients with sinus rhythm (SR), but not in HF patients with AF. On the other hand, data from the Swedish HF registry and Danish AF registry showed that BB can reduce mortality both in HF patients with AF and SR. Further randomized trials are needed to clarify BB effect in HF patients with AF and to resolve these contradictory findings. In the meantime, BB remain a standard medical therapy for all HF patients with reduced ejection fraction, irrespective of rhythm disorder.¹

AF and CRT. AF is often present in CRT patients and interferes with effective biventricular pacing (BVP). When conducted to the ventricles with R-R interval similar or shorter than the lower pacing rate, AF partially or completely precludes BVP and reduces CRT delivery. The BVP > 98% is a cut-point value for the benefit in survival in SR and AF patients. In a study of 54,019 patients with CRT-defibrillator, the presence of AF and BVP < 98% was associated with an increased risk of death. Treatment of AF in CRT patients depends on the type of AF. Catheter ablation of AF is superior to amiodarone in patients with paroxysmal or persistent AF, and AV node ablation is superior to rate control drugs in patients with permanent AF.²

AF and ICD. AF may interfere with ICD therapy in two ways; a) by inducing inappropriate ICD shock when its rapid ventricular rate reaches a device's programmed detection zone of VT/VF, and b) by triggering episodes of VT/VF and consequent appropriate device therapy. AF is the most common mechanism for inappropriate shocks in ICD patients. Patients who receive appropriate or inappropriate shocks have a substantially higher risk of death than similar patients who did not receive such shocks. The risk associated with inappropriate shocks is limited to those receiving shocks for AF.³ To minimize this risk, it is necessary to use detection zone appropriately, to consider monitoring zone for slow VT, to ensure adequate rate or rhythm control, and to activate specific discrimination algorithms.

LITERATURE

1. Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, et al; ESC Scientific Document Group. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. *Eur Heart J.* 2016 Jul 14;37(27):2129-2200. <https://doi.org/10.1093/eurheartj/ehw128>
2. Powell BD, Saxon LA, Boehmer JP, Day JD, Gilliam FR 3rd, Heidenreich PA, et al. Survival after shock therapy in implantable cardioverter-defibrillator and cardiac resynchronization therapy-defibrillator recipients according to rhythm shocked. The ALTITUDE survival by rhythm study. *J Am Coll Cardiol.* 2013 Oct 29;62(18):1674-1679. <https://doi.org/10.1016/j.jacc.2013.04.083>
3. Petrač D. Atrial fibrillation in patients with cardiac resynchronization therapy: therapeutic options. *Cardiol Croat.* 2017;12(5-6):254-63. <https://doi.org/10.15836/ccar2017.254>

RECEIVED:
October 27, 2018

ACCEPTED:
November 5, 2018

