Treba li resinkronizacijska terapija srca biti standardno liječenje u bolesnika s atrioventrikularnim blokom u kojih je indicirana elektrostimulacija srca?

Should cardiac resynchronization therapy be standard treatment of patients with atrioventricular block who require cardiac pacing?

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KLJUČNE RIJEČI: kronična stimulacija desnog ventrikula, resinkronizacijska terapija srca, zatajivanje srca, atrioventrikularni blok.

KEYWORDS: right ventricular pacing, cardiac resynchronization therapy, heart failure, atrioventricular block.

CITATION: Cardiol Croat. 2014;9(9-10):363.

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UVOD: Trajna elektrostimulacija srca predstavlja jedini djelotvoran način liječenja za bolesnike sa simptomatskim atrioventrikularnim (AV) blokom. Međutim, kronična stimulacija desnog ventrikula (SDV) uzrokuje disinkroniju ventrikula, koja može imati štetno djelovanje na srčanu strukturu i funkciju. Ova je činjenica stimulirala kliničare da ispituju ulogu resinkronizacijske terapije srca (CRT) u bolesnika s AV-blokom u kojih je indicirana stimulacija ventrikula.

METODE I REZULTATI: Male randomizirane studije sugeriraju da bolesnici s AV-blokom i umjerenim-teškim sistoličkim zatajivanjem srca (ZS) ili očuvanom sistoličkom funkcijom mogu koristiti biventrikularnu stimulaciju (BiVS) umjesto konvencionalne SDV u odnosu na simptome, remodeliranje lijevog ventrikula (LV) i ejskijsku frakciju LV (EF). BLOCK-HF studija je kreirana da procjeni je li BiVS bolja od SDV u bolesnika sa simptomatskim AV-blokom, I-III. NYHA razredom ZS i EF $\leq 50\%$. Primarni ishod studije (kombinacija smrti, hitnog pregleda zbog ZS koje zahtijeva intravensku terapiju, ili povećanja indeksa end-sistoličkog volumena LV za $\geq 15\%$) bio je značajno manji u bolesnika s BiVS. Sličan učinak bio je vidljiv i za sekundarni ishod ispitivanja. BIOPACE studija je zamišljena da uspoređi BiVS i SDV u bolesnika s AV-blokom koji trebaju stimulaciju ventrikula bez obzira na EF. Preliminarni rezultati pokazuju da su skupine imale sličnu učestalost primarnog ishoda (vrijeme do smrti ili prve hospitalizacije zbog ZS). Između skupina nije bilo značajne razlike u primarnom ishodu među bolesnicima s EF $\leq 50\%$ i bolesnicima s EF $> 50\%$.

ZAKLJUČAK: CRT se može koristiti u bolesnika s AV-blokom i EF $\leq 35\%$, koji trebaju kroničnu stimulaciju ventrikula ($> 40\%$). Temeljem BLOCK-HF studije, CRT se može razmotriti u bolesnika s EF $\leq 50\%$, I-III. NYHA razredom ZS i AV-blokom u kojih se očekuje znatna stimulacija ventrikula. Prema preliminarnim rezultatima BIOPACE studije, bolesnici s AV-blokom i normalnom EF nemaju indicaciju za CRT.

INTRODUCTION: Cardiac pacing is the only effective treatment for patients with symptomatic atrioventricular (AV) block. However, chronic right ventricular pacing (RVP) causes ventricular dyssynchrony, which may have detrimental effects on cardiac structure and function. This reality has promoted clinicians to evaluate the role of CRT in patients with AV block who need ventricular pacing.

METHODS AND RESULTS: Small randomized trials suggested that patients with AV block who have moderate-to-severe systolic heart failure (HF) or preserved systolic function might benefit from biventricular pacing (BiVP) instead of conventional RVP regarding to symptoms, LV remodeling and LV ejection fraction (EF). BLOCK-HF trial was designed to evaluate whether BiVP is superior to RVP in patients with symptomatic AV block, NYHA class I-III HF, and an EF $\leq 50\%$. The trial primary end point (combination of death, urgent HF visit requiring intravenous therapy, or 15% or more increase in LV end-systolic volume index) was significantly lower among patients assigned to BiVP. Similar effect was seen for the secondary end point of death or urgent HF visit. BIOPACE trial was designed to compare BiVP and RVP in patients with AV block requiring ventricular pacing irrespective of EF. Preliminary results show that the groups had a similar rate of the primary outcome (time to death or first hospitalisation due to HF). There was also no significant difference between the groups in the primary outcome among patients with EF $\leq 50\%$ and patients with EF $> 50\%$.

CONCLUSION: CRT can be useful for patients with AV block and EF $\leq 35\%$, who require chronic ventricular pacing ($> 40\%$). Based upon the BLOCK-HF trial data, CRT may be considered for patients with EF $\leq 50\%$, NYHA class I-III HF, and AV block who are expected to require a large proportion of ventricular pacing. According to preliminary results of the BIOPACE trial, patients with AV block and normal EF do not have an indication for CRT.

LITERATURE

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RECEIVED:
September 28, 2014