Nekonvencionalne metode liječenja kritične aortne stenozе

Unconventional methods of treatment critical aortic stenosis

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Transkateterska ugradnja mehaničke valvule (TAVI) priznata je metoda liječenja bolesnika s teškom aortnom stenozom čiji je rizik kardiokirurške operacije previsok. Ipak, u odabranim slučajevima potrebno je koristiti nekonvencionalne metode do definitivne odluke o liječenju.¹

Muškarac star 79 godina, koji do sad nije teže bolovao, hospitaliziran je u slici kardiogenog šoka i pred-edema pluća. Započeta je parenteralna diuretika i inotropna terapija dopaminom i dobutaminom u visokim dozama, uz antibiotsko liječenje pneumonije. Ehokardiografski je ustanovljena biventrikulska kardiomiopatija (EF 15%), teška aortna stenozа malog protoka i niskog gradijenta (max PG 35mmHg, AVA 0.6cm²), intraventrikulska (iv) disinkronija u sklopu bloka lijeve grane (LBBB) (QRS 178ms) i teška plućna hipertenzija. Tijek liječenja kompliciran je učestalim malignim ventrikulskim tahikardijama, koje su zahtijevale trajno liječenje amiodaronom i magnezijem. Na primjenjene mjere liječenja postigne se djelomično volumno rasterećenje, usprkos kojem je bolesnik hemodinamski nestabilan ovisan o inotropnoj potpori, funkcionalnog statusa NYHA 4. Kao palijativna mjera učinjena je balonska valvuloplastika aortne valvule (BAV), postproceduralno s uvećanjem AVA (na 1cm²) i padom gradijenta (maxPG 15mmHg), uz porast sistemskog tlaka. Nakon zahvata ukinuta je inotropna terapija, ali zaostaje učestala ventrikulska ektopija (nsVT). Neovisno o djelomičnom volumnom i tlačnom resterećenju ehokardiografski su i dalje vrlo izraženi znakovi iv disinkronije koji značajno umanjuju sistoličku funkciju, zbog čega je bolesniku implantiran CRT-D uređaj. Obzirom na rezidualnu mehaničku disinkroniju provedena je ehokardiografska optimizacija (nakon preekscitacije lijeve elektrode, EF 25%) te je bolesnik otpušten kući. Nakon otpusta u HS su zabilježena primjerena uključivanja defibrilatora. U praćenju nakon 6 tjedana bolesnik nema tegoba (NYHA II). Zabilježeno je pozitivno remodeliranje miokarda (EF 35%, AVA 0.8cm²). Bolesnik je preporučen TAVI kao konačna metoda liječenja, koju je odbio.

Zaključno, hemodinamski i ritmički nestabilnog bolesnika s terminalnom valvularnom kardiomiopatijom i mehaničkom disinkronijom u LBBB, stabilizirali smo postupnim mjerama za uklanjanje patofizioloških supstrata i konačno resinkronizacijskom terapijom. Nekonvencionalnim metodama liječenja omogućili smo razdoblje oporavka i stvorili preduvjete za kirurško ili perkutano liječenje aortne stenozе.

Transcatheter aortic valve implantation (TAVI) is acknowledged method of treatment for patients with severe aortic stenosis whose surgical risk is too high. Nevertheless, in some cases unconventional methods have to be applied prior to definitive decisions considering treatment.¹

70 year-old-male without any medical history, was admitted because of cardiogenic shock and pulmonary edema. Parenteral diuretics and high dose inotropic therapy with dobutamine and dopamine were administered, along with antibiotics for pneumonia. Echocardiographic examination described biventricular cardiomyopathy (EF 15%), severe low flow-low gradient aortic stenosis (max PG 35mmHg, AVA 0.6cm²), intraventricular (iv) dyssynchrony due to left bundle branch block (LBBB) (QRS 178ms) and severe pulmonary hypertension. Treatment was complicated with frequent ventricular tachycardia, which required continuous treatment with amiodarone and magnesium. On given medication partial volume unloading was achieved, despite which patient remained hemodynamically unstable, dependent on inotropic support, NYHA 4 functional status. As palliative method, aortic valve balloon valvuloplasty (BAV) was performed, followed with increase in AVA (1.0cm²) and decline of gradient (maxPG15mmHg), with rise in systemic pressure. After procedure inotropic therapy was discontinued, but with persistent ventricular ectopic activity (nsVT). In spite of partial volume and pressure unloading, echocardiographic signs of iv dyssynchrony are still evident, with consequently marked reduction in systolic function, because of which permanent CRT-D device was implanted. Considering residual mechanical dyssynchrony, echocardiographic optimization was performed (after pre-excitation of left electrode - EF 25%) and patient was discharged. After discharge appropriate defibrillations were observed in ER. In 6 weeks follow-up patient had no symptoms (NYHA 2). Positive remodeling of myocardium has been observed (EF 35%, AVA 0.8cm²). TAVI, as final treatment method was recommended to patient, but he refused it.

In conclusion, hemodynamically and rhythmologically unstable patient with terminal valvular cardiomyopathy and mechanical dyssynchrony due to LBBB, was stabilized using BAV and cardiac resynchronization therapy. Using unconventional treatment methods, we provided rehabilitation period and pre-dispositions for surgical or percutaneous treatment of aortic stenosis.

LITERATURE

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