Ablacija pravoga parahisalnog akcesornog puta – prikaz slučaja Ablation of a true parahisian accessory pathway – case report

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WPW sindrom posljedica je prisutnosti funkcionalnog akcesornog puta (AP) između atrija i ventrikla (AP-AV). Distribucija AP-AV je nehomogena, a superoparaseptalni AP (ranije opisani kao anteroseptalni) smatraju se najrjeđim (2%). Pravi parahisalni AP predstavlja iznimno rijetku formu istoga.¹⁻³

Prikazujemo 46-godišnju bolesnicu koja unatrag godinu dana ima spontane, naglo nastupajuće, kratkotrajne samoterminirajuće tahikardije povezane s omaglicama, liječene propafenonom. Elektrokardiografski je kod bolesnice prisutan delta val čiji vektor i lokalizacija ukazuje na postojanje superoparaseptalnog AP stoga smo se odlučili za elektrofiziološko (EF) liječenje. EF ispitivanje se provede standardnim kateterima uvedenima putem dvije transfemorale uvodnice na tipične intrakardijalne pozicije, uključujući i anulus trikuspidalne valvule te se mapiranjem utvrdi postojanje pravog parahisalnog AP s anterogradnim i retrogradnim efektivnim refraktornim periodom od 280ms, bez mogućnosti izazivanja tahikardije (vjerojatno posljedično propafenonu). Odlučili smo se za ablaciju (Livewire 7F, SJM, largecurve/ 30 i 40 W/65°C) na tipičnim desnostranim parahisalnim pozicijama, ali bez uspjeha. Odustali smo od daljnje ablacije na poziciji s idealnim elektrogramom zbog „His capture-a“ i rizika od totalnog atrioventrikularnog (AV) bloka. U nastavku odlučujemo se za retrogradni pristup kroz lijevu a. femoralis (slika 1) i mapiranje u području desnog koronarnog kuspisa (DKK). U tom području nađu se zadovoljavajući signali AP zbog čega se pristupi ablaciji (30W/50°C) te se unutar tri ablacijska pokušaja ukupnog trajanja 75s trajno prekine anterogradno i retrogradno provođenje kroz AP uz uredno dekrementno provođenje kroz AV čvor.

Prikazan je slučaj uspješne ablacije rijetkog parahisalnog AP kroz DKK. Navedeni inovativni pristup je rijetko opisan u literaturi. Ovaj je pristup odabran nakon pokušaja ablacije navedenog AP na tipičnim mjestima desnostrano, a radi smanjenja rizika od razvoja od totalnog AV-bloka.^{1,3}

WPW syndrome is caused by a functional accessory pathway (AP) or bypass tract between atrium and ventricle (AP-AV). There are many different AP types, and superoparaseptal (earlier referred as anteroseptal) APs are uncommon (2%), whilst the true parahisian AP is extremely rare form.¹⁻³

A 46-years-old female is presented with a history of spontaneous tachycardia which is short acting, self-terminating and accompanied with lightheadedness. She was treated with propafenone. ECG showed a delta-wave, its localization and vector were characteristic for a superoparaseptal AP. An electrophysiology (EP) study was done. Two standard EP catheters were introduced by transfemoral approach and positioned in typical positions, including tricuspid valve annulus. EP mapping showed a true parahisian AP with antero- and retrograde effective refractory period of 280 msec. We could not provoke tachycardia (possibly due to propafenone effect). Ablation was attempted (Livewire 7F, SJM, largecurve/ 30 and 40 W/65°C) on typical right-sided parahisian positions, but without success. Further ablation attempts on the position with ideal electrogram where abandoned for demonstrating His capture while pacing and subsequent total AV block risk. A different, i.e. retrograde approach (Figure 1) through the left femoral artery was done afterwards and mapping was done in the right coronary cusp (RCC). Good AP signals were recorded in RCC position, so we decided to ablate there. Three ablation attempts (30W/50°C) throughout 75 seconds were done, and complete antero- and retrograde conduction through AP was terminated, while AV node conduction was unaffected.

We presented successful ablation of a rare, parahisian AP through RCC. This is an innovative and rarely undertaken approach to a parahisian AP. This approach was chosen after unsuccessful ablation attempts on typical right-sided position, in an attempt to reduce the risk of a total AV block.^{1,3}

FIGURE 1.

Two catheters introduced through the right femoral vein and positioned in the right ventricle and near the His. The third, ablation, catheter is placed in the right coronary cusp through the left femoral artery (45 degrees left anterior oblique view).

LITERATURE

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