

## Left-sided approach of AV junction ablation for drug refractory atrial fibrillation

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### Abstrak

Ablasi A V junction terbukti efektif pada pasien atrial fibrilasi (AF) yang refrakter dengan isolasi vena pulmonalis inapapun antiaritmia. Akan tetapi pada hampir 15% kasus ablasi AV junction dengan teknik konvensional (sisi-kanan) gagal. Penelitian ini berujuan mempelajari karakteristik potensial berkas His pada ablasi AV junction secara konvensional inapapun dengan teknik sisi-kiri. Dua puluh pasien AF yang simptomatik dan refrakter terhadap antiaritmia (rerata umur 60,539,28 tahun, 11 wanita) dilakukan ablasi AV junction dengan teknik konvensional. Bila 10 kali aplikasi energi frekuensi-radio tidak dapat menyebabkan blok A V total, maka ablasi dilakukan melalui sisi-kiri. Amplitud berkas His yang terekam pada tempat ablasi dianalisa. Seluruh pasien berhasil diablasi, 17 dengan cam konvensional dan 3 pasien dengan teknik sisi-kiri setelah teknik konvensional gagal. Amplitud berkas His pada sisi-kiri lebih besar daripada sisi-kanan yang berkesesuaian ( $16,0 \pm 4,99$  mm vs.  $6,9 \pm 4,02$  mm,  $p = 0,001$ , 95% IK -14,0 to -4,3). Dengan nilai titikpotong amplitude berkas His sisi-kanan  $> 4,87$  mm didapatkan sensitifitas 81.3% dan spesifisitas 53,8% untuk keberhasilan ablasi pada sisi yang bersangkutan. Teknik sisi-kiri pada ablasi AV junction efektif bila teknik konvensional gagal. Pada pasien dengan amplitud berkas His sisi-kanan yang rendah ( $< 4,87$  mm) dianjurkan untuk ablasi dengan teknik sisi-kiri untuk menghindari pemberian energi frekuensi-radio yang tidak perlu. (MedJ Indones 2006; 15:109-14)

*AV junction ablation has been proven effective to treat symptomatic atrial fibrillation refractory to antiarrhythmias or fail of pulmonary vein isolation. However, about 15% of conventional right-sided approach AV junction ablation failed to produce complete heart block. This study aimed to characterize His bundle potential at ablation site during conventional or left-sided approach of AV junction ablation. Twenty symptomatic AF patient (age of  $60.5 \pm 9.28$  and 11 are females) underwent conventional AV junction ablation. If 10 applications of radiofrequency energy are failed, then the ablation was performed by left-sided approach. Seventeen patients are successfully ablated by conventional approach. In 3 patients, conventional was failed but successfully ablated by left-sided approach. The His bundle amplitude at ablation site was significantly larger in left-sided than correspondence right-sided ( $16.0 \pm 4.99$  mm vs.  $6.9 \pm 4.02$  mm respectively,  $p = 0.001$ , 95% CI -14.0 to -4.3). ROC analysis of His bundle potential amplitude recorded from right-sided revealed that cut off point of  $> 4.87$  mm given the sensitivity of 81.3% and specificity of 53.8% for successful right-sided approach of AV junction ablation. In case of failed conventional approach, the left-sided approach is effective for AV junction ablation. An early switch to the left-sided approach may avoid multiple RF applications in patients with a low amplitude His-bundle potential ( $< 4.87$  mm). (MedJIndones 2006; 15:109-14)*