Hubungan Sudut Aortoseptal secara Ekokardiografi dengan Sumber Aritmia Jalur Keluar Ventrikel = Association Between Aortoseptal Angulation Measurement by Echocardigraphy with Origin of Outflow Tract Ventricular Arrhythmia

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Abstrak

Aritmia jalur keluar ventrikel (AJKV) sering didapatkan pada populasi umum. Ablasi radiofrekuensi modalitas terapi dengan tingkat keberhasilan tinggi pada AJKV. Menentukan sumber aritmia penting dilakukan karena membantu dalam memilih tehnik ablasi, menghindari komplikasi, serta menghemat waktu fluoroskopi. Algoritma EKG adalah metode yang telah luas dipergunakan untuk memprediksi sumber AJKV, namun membutuhkan keterampilan dalam analisis dan interpretasi EKG. Studi sebelumnya menduga bahwa terjadinya AJKV kiri disebabkan adanya perubahan anatomi aorta. Penelitian ini bertujuan untuk menilai hubungan antara sudut aortoseptal yang dinilai secara ekokardiografi dengan sumber AJKV. Studi potong lintang pada 60 pasien pascaablasi AJKV. Sudut aortoseptal diukur pada gambar parasternal long axis (PLAX) secara ekokardiografi, sumber AJKV ditentukan berdasarkan pemetaan saat tindakan radiofrekuensi ablasi. Mayoritas subyek merupakan pasien dengan AJKV kanan (n=40, 66.7%). Analisis bivariat menunjukkan bahwa terdapat perbedaan yang signifikan pada variabel usia, tebal septum interventrikular dan sudut aortoseptal antara pasien dengan AJKV kanan dan kiri (p<0,05). Analisis receiver operating characteristic (ROC) dan analisis multivariat menunjukkan bahwa sudut aortoseptal <129.2o merupakan variabel yang secara independen berhubungan dengan sumber AJKV kiri (OR 8.98; IK 2.39-33.75; p=0.001). Terdapat hubungan antara sudut aortoseptal yang diukur secara ekokardiografi dengan sumber AJKV.

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Outflow tract ventricular arrhythmias (OTVA) often found in general population. Radiofrequency ablation has become therapeutic modality with high success rate for OTVA. Determining origin of OTVA before ablation is important because will help in choosing approach, avoiding complications, and saving time. ECG-based criteria is method has been widely used to predict origin OTVA, but requires skills in analysis and interpretation. Previous studies suspected that occurrence of left OTVA due to aortic root anatomical changes. This study aim to assess association between aortoseptal angulation and OTVA origin. Cross-sectional study in 60 patients after OTVA ablation, aortoseptal angulation measured on parasternal long axis (PLAX) view by echocardiographic examinations, origin OTVA determined based on mapping during radiofrequency ablation. Majority subjects were right OTVA (n = 40, 66.7%). Bivariate analysis showed there were significant differences in age, interventricular septum thickness and aortoseptal angulation between right and left OTVA (p <0.05). Receiver operating characteristic (ROC) analysis and multivariate analysis showed that aortoseptal angulation <129.2˚ was variable that independently related to left OTVA origin (OR 8.98; IK 2.39-33.75; p= 0.001). There is association between aortoseptal angulation measurement by echocardiography with OTVA origin. Angle below 129.2˚ have 75% specificity and sensitivity to predict a LVOT origin OTVA