EARLY VS DELAYED ATRIOVENTRICULAR NODAL CONDUCTION DISEASE POST ALCOHOL SEPPTAL ABLATION IN HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY PATIENTS

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PROBLEM

Arrhythmias and conduction abnormalities due to induced ischemic scar tissue is expected post alcohol septal ablation (ASA). Complete heart block (CHB) is a possible complication following ASA.

BACKGROUND

Hypertrophic obstructive cardiomyopathy (HOCM) is characterized by left ventricular hypertrophy and dynamic left ventricular outflow tract (LVOT) obstruction. Alcohol septal ablation (ASA) has been shown to improve symptoms and LVOT obstruction.

OBJECTIVE

The objective of this Quality study was to describe conduction system abnormalities post ASA ablation in patients at Aurora St. Luke’s Medical Center.

METHODS

Comprehensive data collection was completed on 73 HOCM patients (mean ± SD) age of 65 ± 11 years, 52% were female, 92% were white) who underwent ASA between 2011 and 2020. Medical history included mean BMI (Kg/m²) (32 ± 7) and presence (n, %) of diabetes (18, 25%), hypertension (63, 86%) and coronary artery disease (34, 47%). Patient use of beta-blockers (92%) and disopyramide (40%) was also included.

RESULTS

Pre-procedure electrocardiography showed a median (interquartile range) QRS duration (ms) of 108 (92, 134) and PR interval (ms) of 176 (162, 210). Echocardiography revealed a mean left ventricular ejection fraction (%) of (70 ± 8) and septal thickness (mm) of (21 ± 5), and a median LVOT gradient (mmHg) at rest of 48 (21, 76). Median ethanol dose (ml) was 2 (1.5, 2.5). Post ASA, median troponin peak was 39.5 (27, 68) (ng/ml).

The first episode of CHB was noted early during the procedure in 19 patients. 42% (10/19) of these had AVN conduction recovery. All patients (n=3) with onset of CHB after the procedure required PPM implant before discharge (Figure B).

CONCLUSIONS

In HOCM patients who underwent ASA procedure, 19% had PPM implant on discharge. Interestingly, 42% of the patients who had early CHB during procedure had AVN recovery before discharge.