

Characteristics and Follow Up of Children with Isolated Congenital Heart Block

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Introduction: Congenital heart block (CHB) is a rare disorder that may be associated with mortality and morbidity. It has an incidence of about 1 in 22,000 live births. Many times, no clear etiology is determined for isolated CHB. In this study we documented the characteristics of our isolated CHB patients with pacemakers (PM).

Methods: The study was limited to patients with isolated, complete, permanent block. The medical records of children aged between 0-18 years who underwent PM implantation for CHB were systematically reviewed. Patients with any other systemic disease which may affect growth were excluded while analyzing growth parameters.

Results: Between January 2000-January 2015 a total of 63 (F/M: 31/32) patients were diagnosed as CHB. Only 5 of them (%7.9) were born from mothers with systemic lupus. The other 58 patients' mean age at diagnosis is 6.32 ± 3.78 (1-16) years. Atrioventricular block was asymptomatic in 40 (69%) patients and was diagnosed after the detection of bradycardia or murmur by chance. Five patients had chest pain, four patients had syncope and three patients had convulsions. In physical examination heart rate was 52.5 ± 5.8 /min. In holter examination minimum, mean and maximum heart rates were 34.2 ± 4.7 /min, 50.8 ± 8.7 /min and 98.5 ± 29.3 /min respectively. The mean interval between diagnosis of AV block and pacemaker implantation was 1.07 ± 0.3 years. During a mean follow-up of 8.49 ± 2.4 years (6-15 years), no patient died or developed dilated cardiomyopathy.

We also evaluated 28 patients with full information for weight and height percentiles before PM implantation and after follow up. First percentile values for weight and height were 32.5 ± 28 ; 46 ± 29 and the last percentile values for weight and height were 45.8 ± 33 ($p > 0.05$); 57.2 ± 30 ($p > 0.05$) respectively.

Conclusions: It is important to recognize an asymptomatic complete AV block in the pediatric population. PM implantation is safe and the only treatment for these patients. Effective cardiac output is important for growth. Although not statistically significant, we can say that PM implantation supports growth in patients with CHB.