Causas y o prognóstico do LBBB (BCRI) - 2007

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Causes:

A block of the LBBB is more likely to have serious health implications than a RBBB. With LBB involvement, there's a greater likelihood of the presence of heart disease associated with hypertension or coronary artery disease. People with LBB involvement also have an increased risk of developing heart failure.

A-control study was designed to assess the incidence and mortality of CLBBB Imanishi et al investigated 17,361 subjects (6,663 men and 10,698 women) who underwent biennial health examinations, including ECG and cardiothoracic ratio measurements from 1958 to 2002. A total of 110 incident CLBBB cases (41 men and 69 women) were observed, and their basic characteristics were compared with those of 456 age- and gender-matched controls (156 men and 300 women). Also, the possible association between CLBBB and all-cause and cause-specific mortality was examined using a Cox proportional hazard model adjusted for age, gender, and underlying disease. The average age at LBBB diagnosis was 69.6 +/-

10.0 years in men and 68.3 +/- 10.9 years in women, and the incidence of LBBB increased progressively with age. Also, underlying disease, hypertension, and CAD were significantly associated with LBBB. The cardiothoracic ratio was significantly different at the diagnosis of LBBB between those with LBBB and controls. ECGs manifestations before CLBBB diagnosis included a higher rate of LVH and ST-T abnormalities in patients with CLBBB. On Cox analysis, CLBBB did not predict for all-cause mortality, but it did predict for mortality from CHF. The mean patient age at CLBBB diagnosis was relatively elderly, and the CLBBB incidence increased progressively with advancing age. Hypertension, CAD, LVH, ST-T abnormalities, and an increased cardiothoracic ratio were associated with CLBBB. CLBBB predicted for mortality from HF but not for all-cause mortality, independent of age, gender, and underlying disease.(Imanishi R, Seto S, Ichimaru S, et al. Prognostic significance of incident complete left bundle branch block observed over a 40-year period. Am J Cardiol. 2006;98:644-648.)

LBBB usually happens as a consequence of other diseases such as:

1) Hypertension;

2) Coronary artery disease (CAD) with and without , myocardial infarction; Patients with LBBB and concomitant CAD has a worse prognosis than those with LBBB without CAD. In addition, subjects with CAD and concomitant LBBB have a higher cardiovascular mortality than those with a

similar extent of CAD but without LBBB. Because the presence of LBBB makes the noninvasive identification of CAD problematic, patients with LBBB often are referred for coronary angiography to assess the presence and severity of CAD. To determine the clinical and demographic variables that might help identify those with CAD, Abrol et al. analyzed data from 336 consecutive patients with LBBB referred for coronary angiography. Of the 336, 54% had CAD. In conclusion, those with CAD were likely to be older, Caucasian, and men; they were more likely to have angina pectoris, myocardial infarction, and diabetes mellitus; and they were more likely to have a left ventricular ejection fraction <0.50. In contrast, patients with heart failure were less likely to have CAD. (Abrol R, Trost JC, Nguyen K,Predictors of coronary artery disease in patients with left bundle branch block undergoing coronary angiography. Am J Cardiol. 2006; 98:1307-1310.)

3) Association of previous one;

4) Dilated cardiomyopathy ,

5) Cardiomyopathies;

6) Aortic valve diseases: aortic valve endocarditis, rheumatic fever with aortic valve involvement,

7) Others valve disease;

8) Hypertrophic cardiomyopathy after surgery of septal myomectomy

9) Myocarditis;

10) Progressive Conduction System Disease (PCCD) Defined on ECG by evidence of BBB, i.e., CRBBB, LAFB or LPFB, or complete heart block, with broad QRS complexes. Progression has been shown from a normal ECG to RBBB and from the latter to complete heart block. These ECG features differentiate PFHBI from progressive familial heart block type II (PFHBII; in which the onset of complete heart block is associated with narrow complexes. Electrocardiographically the changes represent, respectively, bundle branch disease (PFHBI) and atrioventricular nodal disease with an atrioventricular block and an idionodal escape rhythm (PFHBII). PFHBI is manifested symptomatically when complete heart block supervenes, either with dyspnea, syncopal episodes, or sudden death. Treatment, which is best managed by regular electrocardiographic follow-up, is by the timely implantation of a pacemaker. PCCD, also called Lenegre-Lev disease is one of the most common cardiac conduction disturbances. It is characterized by progressive alteration of cardiac conduction through the His-Purkinje system with CRBBB or CLBBB and widening of QRS complexes, leading to complete atrioventricular block and causing syncope and sudden death. It represents the major cause of pacemaker implantation in the first world (0.15 implantations per 1,000 inhabitants per year in developed countries). (10-1) Lenegre disease or progressive familial heart block type I can be caused by mutation in the SCN5A gene(600163), which resides on chromosome 3p21. A locus for another form of this disorder has been mapped to 19q13.2-q13.3 604559). (10-2) Lev disease PCCD is considered a primary degenerative disease or an exaggerated aging process with sclerosis affecting only the conduction tissue. Lev's disease

is most commonly seen in the elderly, and is often described as senile degeneration of the conduction system.It was described independently by two researchers in 1964(Lenegre J. The pathology of complete atrio-ventricular block. Prog Cardiovasc Dis 1964;6:317-323.) but the condition is generally called after Lev. Stokes-Adams attacks can be precipitated by this condition. These involve a temporary loss of consciousness due to ventricular fibrillation or asystole.

11) Metastatic heart tumors,

12) Congenital heart disease: LBBB in children is not a benign entity. LBBB is associated with anatomic malformations and abnormalities of the conduction system. LBBB has been observed after surgery in the left ventricular outflow tract, septal myomectomy, replacement of the aortic valve, and transcatheter closure of perimembranous ventricular septal defects;

13) Subvalvar aortic resection;

14) Anomalous origin of the left coronary artery from the pulmonary artery;

15) Left ventricular non compaction disease;

16) Patients with left ventricular hypertrophy;

17) Hemochromatosis;

18) Sclerodegenerative diseases

19) Perinatal exposure to HIV type 1;

20) Wolff-Parkinson-White syndrome when the abnormal conduction pathway enters the right ventricle.