HYPERTROPHIC CARDIOMYOPATHY, CORONARY ECTASIA MYOCARDIAL BRIDGING & INTERNAL CARDIOVERTER DEFIBRILLATOR IMPLANTATION

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SUMMARY

Hypertrophic Cardiomyopathy is one of the causes of sudden cardiac death. Here we present one case with Hypertrophic Cardiomyopathy with ectatic vessel and myocardial bridging who later underwent Internal Cardioverter Defibrillator implantation.

Key words: Hypertrophic Cardiomyopathy, Coronary Ectasia, Myocardial bridging, Internal Cardioverter Defibrillator.

INTRODUCTION

The clinical course of Hypertrophic Cardiomyopathy (HCM) remain stable over long periods of time with 25% of HCM cohort achieving normal longevity\(^1\)\(^-\)\(^5\). A high prevalence of Myocardial bridging & HCM has been reported\(^5\). Myocardial bridging may be found at multiple sites in HCM\(^6\). Here we present one case with HCM, ectatic coronary vessels, myocardial bridging & Internal Cardioverter defibrillator (ICD) implantation.

CASE REPORT:

A 50 year old male was evaluated for exertional angina Functional class III with history of sudden death of his brother at age of 45. ECG reveals Sinus rhythm with Right axis deviation & T-wave inversion in V Leads (Fig 1). Echocardiography showed asymmetrically hypetrophied Left ventricle with septal thickness of 33mm and posterior wall thickness of 12mm (Fig 1). The patient underwent coronary angiography which showed Ectatic left main, Left Anterior descending artery (LAD), Left Circumflex (LCx) & Right Coronary Artery (RCA) with myocardial bridging in mid LAD, LCx and RCA. (Fig 2). Left Ventricular systolic function was normal with left ventricular end diastolic pressure (LVEDP) of 26mmHg. The patient was already on optimal dose of b-blockers & aspirin. As there was history of sudden cardiac death in family and maximum left ventricular wall thickness of 33mm on Echocardiography ICD was implanted for primary prevention of sudden cardiac death.

DISCUSSION:

The vascular Ectasia supplying Hypertrophic myocardium suggest that vascular dilatation was related to functional and or structural changes of left ventricular wall. In HCM phasic characteristics of coronary arterial blood flow may be exaggerated to the extent that even systolic flow reversal has been described\(^7\).

The clinical symptoms of angina in presence of massive coronary ectasic could be due to mismatch of metabolic demands of myocardium and blood supply\(^8\) compromised by intermittent flow obstruction by myocardial bridges and possible co-existent small vessel disease \(^9\)\(^-\)\(^10\). In literature ectatic vessel with myocardial bridge has been reported in single vessel only\(^11\). Our case is unusual in which ectasia with myocardial bridging in HCM were present in three vessels i.e. LAD, LCx & RCA. Moreover there was history of sudden cardiac death in family for which ICD was implanted as primary prevention\(^12\).

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Figure - 1
Hypertrophic Cardiomyopathy (a) ECG showing Right Axis Deviation & T-wave inversion in V-leads. (b) Echocardiography showing septal wall thickness of 33mm & posterior wall thickness of 12mm.

Figure - 2
Hypertrophic Cardiomyopathy, coronary ectasia & myocardial bridging (MB) in mid (a) LAD (b) LCx (c) RCA & (d) Left Ventriculogram.
REFERENCES:


