**MYOCARDIAL ISCHEMIA CAUSED BY SINGLE CORONARY ARTERY IN HYPERTROPHIC CARDIOMYOPATHY**

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**Background.**Chest pain, in absence of epicardial coronary artery disease, is a frequent complaint of patients with hypertrophic cardiomyopathy (HCM) and is attributed to microvascular disease, intramyocardial course of major arteries, or intracavitary gradients. Coronary artery anomalies may cause myocardial ischemia by various mechanisms but have not been included in differential diagnosis of chest pain in HCM. We present a summary of reported cases of HCM coexistent with congenitalisolated single coronary artery (iSCA).

**Methods & Results.**Exhaustive literature search identified 10 adults with HCM (age 46±22 years,70% men) among 713 adults with iSCA. Prevalence of HCM among reported cases of iSCA was 7 times higher than expected in general adult population (1.4%-vs-0.2%, p=0.03). Single coronary ostium arose from left coronary sinus in 6 and from right coronary ostium in 4. Presenting complaints were chest pain in 7 and dyspnea, syncope, and sudden cardiac arrest in remaining 3. HCM was characterized by asymmetrical basal septal hypertrophy [n=7 with (n=5) or without (n=2) outflow obstruction]; mid-ventricular hypertrophy (n=1) and apical variant (n=2). One out of 4 patients who underwent testing for ischemia had positive result attributable to a short left anterior descending coronary artery. No obstructive epicardial disease was seen in any patient. Two patients underwent alcohol septal ablation, 3 had medical management and 2 had septal myectomy and coronary artery unroofing for intramyocardial course. iSCA contributed to myocardial ischemia in 30%.

**Conclusion.**iSCA and HCM may coexist at a higher frequency than expected by chance alone. Presence of iSCA may complicate management of chest pain in HCM and occasionally may be a major contributor to myocardial ischemia in this setting. iSCA should be included in differential diagnosis of chest pain in adults with HCM.