To the Editor:
I read with interest the recent paper by Hawkins et al1 in which they investigated the prevalence and clinical features of the coronary slow flow phenomenon (CSFP). They identified 1,714 consecutive patients who underwent coronary angiography and included 158 patients with normal coronary arteries and normal left ventricular function. Of this subgroup, 96 subjects had CSF in at least 1 coronary vessel, representing a prevalence of 5.5% of the total population. They found that subjects with CSFP were more obese and had lower levels of high-density lipoprotein (HDL). In the CSFP group, total cholesterol and low-density lipoprotein (LDL) levels and TIMI frame count increased significantly with increasing vessel involvement. They concluded that male sex and obesity were independent risk factors for CSFP.

My colleagues and I performed a similar study, which was published in 2011.2 We reviewed 21,675 patients admitted to our clinic between June 2003 and January 2006; 150 patients with angiographically normal coronary arteries but with CSF were included in the study. Clinical characteristics and coronary artery or arteries with slow flow were determined. The number of male patients was 95 (63.3%) and the number of female patients was 55 (36.7%). The prevalence of CSFP was 0.5%. The mean age of study patients included in the study was 54±12 years (range 21–80); 45% of the patients had hypertension and 38% had hyperlipidemia; 31% of the patients were smokers and 14% had diabetes. Angina with exercise was the most common presenting symptom and was present in 51% of the patients; 36% of the patients presented with rest angina, and dyspnea with exercise was the first symptom in 25% of the patients. Hospitalization for acute coronary syndrome (ACS) had occurred for 12% of the patients and 19% had a segmental wall motion disturbance. The mean LDL level was 115±36 mg/dl (range, 37–233 mg/dl), the mean HDL level was 44±10 mg/dl (range, 27–80 mg/dl), and the mean fasting glucose was 103±30 mg/dl (range, 57–280 mg/dl). The left anterior descending (LAD) artery was the most common coronary artery to show the CSF pattern, followed by slow flow in all 3 coronary arteries.

In conclusion, our study had a larger population than the study performed by Hawkins et al who found a prevalence of CSF of 5.5% in their study group, which is higher than expected. In a previous study it was shown that 1% of all patients referred for angiography had CSFP, using a definition of slow flow as abnormal TIMI frame count in at least 1 vessel.3 We found a 0.5% prevalence of CSFP and the LAD was the most common coronary artery in which slow flow was seen. The most common presenting symptom was angina with exercise and 12% of the patients were admitted with ACS, with a segmental wall motion disturbance detected in 19%. This finding suggests that the CSFP is not a normal variant but can also cause ACS and myocardial necrosis, making it absolutely a pathological entity.

References

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