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Teenagers (<20 years) versus Young adults (20-29 years); Are They Behavior Similarly on Ach-Provocation Test for Significant Coronary Artery Spasm ?

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Background: We compared the prevalence of CAS and associated parameters in the teenage patients with those of the young adult patients by intracoronary acetylcholine (Ach) provocation test. Methods: A total of 55 consecutive teenage patients (<20 years, n=11) and young adult patients (between 20 to 29 years, n=44) without significant coronary artery disease (CAD) underwent the Ach provocation test by injecting incremental doses of 20, 50, 100 ug into the left coronary artery. Results: The clinical and angiographic characteristics were similar between the two groups. Spasm at the baseline and after Ach injection, the rate of positive provocation test result, the incidence of ischemic chest pain and ST-T changes during the test, the incidence of diffuse spasm and more severe spasm were similar between the two groups even after the multivariate logistic analysis (Table). Conclusion: In our study, there was no major impact of the age how much young they are, even in teenagers in predicting significant CAS

Table. Acetylcholine provocation test and associated parameters

Variables, n (%)	Teenagers (<20) (n=11 pts)	Young Adults (20-29) (n=44 pts)	*P* value
Age (years)	15.8 ±3.51	24.6±2.6	
Male	8 (72.7)	29 (65.9)	1.00
Hypertension	2 (18.2)	6 (13.6)	0.65
Smoking	1 (9.1)	13 (29.5)	0.26
Hyperlipidemia	7 (63.6)	16 (36.4)	0.17
Ach Provocation (+)	5 (45.5)	12 (27.3)	0.84*
Myocardial Bridge	4 (36.4)	8 (18.2)	0.23
ST change	0 (0.0)	2 (4.5)	1.00
Chest pain	5 (45.5)	12 (27.3)	0.28
(+) Provocation at Ach 100μg	9 (81.8)	32 (72.7)	0.71
Spasm after Ach injection			
Focal	0 (0.0)	3 (6.8)	1.00
Diffuse	11 (100)	41(93.2)	1.00

*(On multivariate analysis)