

## Commentary

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Ischemic heart disease (IHD) has been considered as typical for older and middle-age patients. In 1953 Enos et al. [1] published the results of pathologic investigation of 300 young American soldiers killed during the Korean War. Atherosclerotic lesions, from luminal narrowing to complete occlusion in one or more coronary arteries, were found in more than 77% of cases. Patients with rapidly progressive coronary atherosclerosis have a higher prevalence of cardiovascular risk factors. In spite of a growing number of new risk factors, cigarette smoking, dyslipidemia, positive family history of IHD and hypertension remain the most significant [2].

The reviewed paper took up the important problem of aggressive atherosclerosis in women under 45 years of age who required coronary artery bypass graft (CABG) surgery. As we well know, the outcomes of CABG in young women are worse than in men. It is worth mentioning that almost 75% of women had myocardial infarction before surgery. Nearly 45% were in CCS functional class IV. The authors have demonstrated the high incidence of typical risk factors in this population. Cigarette smoking, elevated cholesterol level, and hypertension were noted in 94.8%, 82.7%, and 44.8% of patients, respectively. The most common risk factors before CABG in patients aged < 40 years treated in the Silesia Center of Heart Diseases in Zabrze were smoking (93%), hypercholesterolemia (90%), and positive family history (80%) [2].

The coincidence of aggressive atherosclerosis and risk factors causes that in many young adults the results of percutaneous coronary angioplasty (PCI) or surgical revascularization are less impressive than expected. Kelly et al. [3] documented a recurrence rate of anginal symptoms of 37.5% during 7-year follow-up after CABG in patients under 40 years of age. Rohrer-Gubler et al. [4] found that progression of IHD defined as the need for repeated intervention (PCI or CABG) was three times faster in patients who underwent CABG before 40 years of age compared with patients who underwent surgery at the mean age of 64.2 years.

The aggressive nature of coronary artery atherosclerosis in young women confirms the need of arterial revascularization. The advantage of arterial grafts over vein anastomoses in alleviating anginal symptoms is particularly clear in younger patients. French et al. [5] found that lack of use of the internal mammary artery for CABG contributed to the increase in mortality during long-term follow-up among patients under 40 years of age. Ng et al. [6] documented in a multivariate analysis that the use of the internal mammary artery was significantly related to the prolonged survival in young patients after surgery. It is noteworthy that in the reviewed material the left internal mammary artery (LIMA) was used in 96.5% of patients.

The authors emphasized that continuation of smoking after surgery is related to worse results of surgery during the follow-up period. Smokers had lower exercise tolerance, and more often had composite clinical endpoint, and complaints according to CCS and NYHA functional class.

Although CABG is a well-established method of treatment of IHD, the long-term results do not depend only on the type of graft used and pharmacotherapy. Elimination of such risk factors as cigarette smoking or hypercholesterolemia, optimal treatment, and regular physical activity are necessary in maintaining graft patency. It is worth reminding that prevention is more effective, cheaper, and especially crucial for this subgroup of patients.

## References

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