Universal screening for hypercholesterolemia in children at 11- and 17 years of age: unique in Slovakia for 17 years

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Atherosclerosis begins in childhood. In adults, elevated non-HDL-cholesterol concentrations, low HDL-cholesterol concentrations, hypertension, smoking, diabetes, and obesity are associated with advanced atherosclerotic lesions and increased risk of clinically manifest atherosclerotic disease. These risk factors also are associated with early atherosclerosis in young persons. Control of these risk factors is the major strategy for preventing atherosclerotic disease.

The current recommendations for the primary prevention of cardiovascular diseases in Slovakia include universal nation screening for hypercholesterolemia: national programmed routine examination of 11- and 17 years old children by primary pediatricians. The national universal screening in Slovakia was introduced gradually, and the referral rate to the tertiary institution reached its expected level only in 1998. Screening was gradually implemented throughout the whole country, reaching an estimated majority of 11 and 17-years-old children, approximately 1 million from 2004 until now. Data for the efficacy of a national universal screening for detection of familiar hypercholesterolemia are lacking. The universal screening for hypercholesterolemia together with familiar history and premature cardiovascular complication identified a disease-causing variant for familiar hypercholesterolemia.

The long-range prevention of atherosclerosis and its sequel by control of the risk factors for adult coronary artery disease should begin in adolescence and young adulthood. Primary pediatricians play an important role in primary prevention of cardiovascular diseases, detection of familial hypercholesterolemia in a cohort of children with hypercholesterolemia. Clinic for preventive cardiology and lipid metabolism disorders focus on management and treatment of children with positive screening test result.

Biography

Schusterová I is an Associate Professor and the Head of the Department of Paediatrics and Adolescent Medicine, Children University Hospital, P J Š University in Košice, Slovakia. At the same time, she is the Head Physician in the Tertiary Center for Valvular and Congenital Heart Defects, Eastern Slovak Institute of Cardiac and Vascular Diseases. She took specialization exam from Adult and Pediatric Cardiology at National Institute of Cardiac and Vascular Diseases in Bratislava, Slovak Republic. After Graduation, she took part in Fellowship Training at Ottawa Civic Hospital, and later on performed research work in the area of Cardiology at University of Ottawa in Canada. In the period from 11/1999 till 7/2004, she completed her training at Cardiologic Department, II. Internal Medicine Clinic, General Hospital, Vienna under supervision of Professor Dr Gerald Maurer. Later in 2005, she broadened her professional knowledge and skills at Cardiac Surgery Clinic, Kardiocentrum Universitätsklinik in Bad Oyenhausen, Germany. Her research interests focus on preventive cardiology, obesity, and disorders of lipid metabolism, atherosclerosis and their prevention in the paediatric age group.

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