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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Routine Ambulatory Blood Pressure Monitoring to Detect Hypertension in Early Life

Londe S, Bourgoignie JJ, Robson AM, Goldring D. Hypertension in Apparently Normal Children. *J Pediatr* 1971;78:569-77.

Fifty years ago, Londe et al reported elevated systolic and/or diastolic blood pressures in asymptomatic children, after meticulous repeated measurements and follow-up (3-8 years). The majority of the children did not have any cause for hypertension; however, 54% of the hypertensive children were overweight and 44% had a hypertensive parent. The authors proposed that the elevated blood pressure may be early display of essential hypertension. This report reiterated the importance of proper technique of routine blood pressure measurement in children and raised several questions: whether obesity in children truly resulted in hypertension and whether loss of weight would lead to a decrease in blood pressures. The effects of diet and regular exercise on blood pressure in such children and control of other factors like hypercholesterolemia might also decrease the risk of subsequent cardiovascular disease.

It is now well-established that elevated blood pressure is related directly to higher values of body mass index, with the OR of hypertension being 2.6 in children with obesity compared with children without obesity. The American Academy of Pediatrics updated normative blood pressure percentiles for boys and girls have excluded children with overweight or obesity, which constituted nearly 20% of the population used for obtaining the previous charts.¹ The American Academy of Pediatrics also recommends annual blood pressure recording for children ≥ 3 years and more frequently in high-risk groups, including children with obesity. Ambulatory blood pressure monitoring is now recommended for the diagnosis and management of hypertension, including suspected white coat hypertension or masked hypertension. The Dietary Approaches to Stop Hypertension diet (DASH diet) is a vegetable and fiber-rich diet with decreased sodium, meat, and fat intake and can decrease blood pressure. At least 60 minutes per day of moderate to strong aerobic training for normalization of body weight and a body mass index below the 85th percentile for sex and age is recommended.²

Because childhood hypertension is directly associated with left ventricular hypertrophy and increased arterial wall thickness, implementation of a program advocating a healthy diet and physical activity are mandatory and should start in early childhood. A program of ambulatory blood pressure monitoring is essential to the early detection of hypertension.

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