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Prevalence of Paediatric Hypertension among Adolescents in Uttar Pradesh, India

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ABSTRACT

Introduction: Paediatric hypertension is becoming a significant public health issue in Uttar Pradesh, linked to future cardiovascular problems and adult hypertension. Recent studies show rising blood pressure rates among urban and overweight adolescents, particularly in Banda, Moradabad, and Aligarh, highlighting the urgent need to assess their causes and prevalence in the region.

Aim: To review the prevalence, associated risk factors, and regional variations of paediatric and adolescent hypertension reported in studies from Uttar Pradesh.

Materials and Methods: Relevant published studies related to paediatric and adolescent hypertension in Uttar Pradesh were searched through PubMed and Google Scholar, and reference screening. Information regarding prevalence, associated risk factors, and study characteristics was extracted and summarised descriptively.

Results: The reviewed studies have indicated a high prevalence of elevated blood pressure and hypertension among adolescents in Uttar Pradesh. In the Banda district, the prevalence of prehypertension and hypertension was reported as 13.28% and 12.24%, respectively. A study among adolescent girls in Moradabad reported 15.8% prehypertension and 2.2% hypertension, while the Aligarh study documented 10.7% elevated blood pressure and 18.5% hypertension. Higher blood pressure levels were significantly associated with increasing age, male gender, urban residence, higher socioeconomic status, overweight and obesity, unhealthy dietary habits, skipping breakfast, soft-drink consumption, high saturated fat intake, and reduced consumption of green leafy vegetables. The difference in prevalence rates was partly because of differences in diagnostic criteria and blood pressure measurement protocols.

Conclusion: Available evidence reveals that nearly one in five adolescents in Uttar Pradesh may have elevated blood pressure or hypertension. Lifestyle-related and nutritional risk factors play a major role in the increasing burden of childhood hypertension. Early identification through standardised blood pressure screening and implementation of school-based nutrition and physical-activity interventions are essential to reduce long-term cardiovascular risk in this population.

Keywords: Adolescent, Blood pressure, Cardiovascular diseases, Child, Hypertension, Paediatric obesity.

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