

RELATIONSHIP BETWEEN SIZE AT BIRTH AND BORDERLINE BLOOD PRESSURE OR HYPERTENSION IN YOUNG ADULTS: FINDINGS FROM A BRAZILIAN COHORT STUDY

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Background: Several studies have reported that disorders of fetal growth are associated with non-communicable chronic diseases in adulthood, among them hypertension (HT), according to the hypothesis of the fetal origin of adult diseases. The aim was to describe the prevalence of borderline blood pressure (BBP) and HT among young adults born in the 1978/79 Ribeirão Preto cohort, and to assess the risk of BBP and HT in young adults associated with size at birth, adjusted for birth and adult life characteristics.

Methods: Of the 6827 singletons born in hospitals, 2060 were assessed at 23/25 years. Blood was collected, anthropometric assessment was performed and information was obtained regarding occupation, schooling, life habits and chronic diseases. Blood pressure (BP) was classified as:

- 1) BBP: systolic BP (SBP) ≥ 130 mmHg and/or diastolic BP (DBP) ≥ 85 mm Hg;
- 2) HT: SBP ≥ 140 and/or DBP ≥ 90 mmHg. Sociodemographic and clinical characteristics at birth and in adulthood were evaluated applying a polytomic logistic regression model.

Results: BBP prevalence was 13.5% (men 82.8%) and HT prevalence 9.5% (men 89.8%). BBP was associated with male gender (aRR 9.11; 95% CI 6.23-13.32), BMI > 30 kg/m² (aRR 3.01; 95% CI 1.87-4.85) and altered waist circumference (aRR 1.68; 95% CI 1.17-2.40), whilst HT was associated with the same variables plus high fasting glycemia (aRR 2.86; 95% CI 1.42-5.76).

Conclusions: The prevalence of BP and HT among young adults of this cohort is elevated, with no relation with size at birth but associated to altered body adiposity and glycemia.