Circulating Insulin-like Growth Factor-I independently predicts blood pressure in apparently healthy children

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BACKGROUND
- Discordant associations between IGF-I and blood pressure exist, with scarce reports in apparently healthy children.
- IGF-I, together with calcium and phosphorus, are involved in bone metabolism and vascular health.

OBJECTIVES
To study the association between IGF-I serum levels and blood pressure in children, together with the interaction of the serum calcium-phosphorus product (Ca*P) in this association.

RESULTS
1. IGF-I and IGF-I/Ca*P-3 molar ratio associate with a worse cardio-metabolic profile

- Table 1. Pearson correlation coefficients for IGF-I and SBP, DBP and pulse pressure are higher with increasing Ca*P levels.

2. Associations of IGF-I and IGF-I/Ca*P-3 molar ratio with SBP are stronger in children with the highest Ca*P

- Table 3. Multivariate linear regression analyses of SBP as dependent and IGF-I as independent variables.

3. IGF-I and IGF-I/Ca*P-3 molar ratio remain associated with SBP after adjusting for confounding variables

- Table 4. Multivariate linear regression analyses of SBP as dependent and IGF-I/Ca*P-3 as independent variables.

CONCLUSIONS
Our results suggest that IGF-I is an independent predictor of SBP in healthy children, specially in those with high Ca*P levels.