INTRODUCTION
Adverse intrauterine and perinatal life predispose to development of cardiovascular disease in adulthood. The link between deficient diet during pregnancy and hypertension has been established in humans and rat models but the mechanisms responsible are not completely understood. We aim to assess if undernutrition during pregnancy induces early structural cardiovascular alterations in the offspring.

EXPERIMENTS
- Sprague Dawley rat
- Pregnant
- Sprague Dawley rat

METHODS
Animal model

RESULTS
Maternal undernutrition induced a significant reduction of the offspring body weight at birth and at the age of 6 days, with no significant reduction of tibial length.

Internal elastic lamina from rats exposed to undernutrition exhibited increased fluorescence intensity of the internal elastic lamina, suggesting increased or more compact elastin.

Confocal microscopy demonstrated a significant increase of wall thickness in the carotid artery from 6 day old rats derived from maternal undernutrition.

CONCLUSION
Maternal undernutrition during pregnancy induces arterial narrowing and heart hypertrophy at an early age which might contribute to hypertension development in the adult.

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