

6th World Congress on

Obesity

August 08-10, 2016 Toronto, Canada

Body weight changes during the induction of DOCA-salt hypertension

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Aim: There is evidence that confirm the link between body weight and blood pressure. In the present study, we investigated the changes of body weight and renal sodium excretion in an experimental model of hypertension.

Methods: Right nephrectomy was carried out in the all control and test male Sprague–Dawley rats. Hypertension was induced by subcutaneous deoxycorticosterone (DOCA) injection (20 mg/rat/week) and 1% sodium chloride and 0.2% potassium chloride added to the drinking water for 4 weeks. Body weight, systolic blood pressure and fractional excretion of sodium were measured weekly during the induction of hypertension.

Results: The treated rats exhibited a mild elevation of blood pressure at 1 week and a profound increase at 2, 3 and 4 weeks. The same pattern of increase was observed in these 4 weeks for fractional excretion of sodium. Although body weight remained almost unchanged at 1 week and it mildly decreased at other weeks.

Conclusion: This study indicates a robust increase in the systolic blood pressure and fractional excretion of sodium in DOCA-salt treated rats without increasing in body weight. Thus it concluded that body weight may not contribute to onset and progression of the elevation of blood pressure in DOCA-salt hypertension model.

Biography

Behjat Seifi has completed his PhD of Physiology at Tehran University of Medical Sciences. She is now Associate Professor in Physiology department at Tehran University of Medical Sciences. She has published 40 papers in journals that are indexed in PubMed in nephrology, hypertension and obesity.

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