

24<sup>th</sup> World Congress on **Pharmacology**  
&  
**7<sup>th</sup> World Heart Congress**

August 19-20, 2019 Vienna, Austria

**Salt-sensitivity-contributing factor for the development of metabolic syndrome**

Irina Andronikashvili, Simonia G and Pantsulaia N  
Tbilisi State Medical University, Georgia

**Statement of the Problem:** It is known that and salt loading not only increases blood pressure (BP) but causes cardiovascular damage in animals and humans. Recent clinical studies have demonstrated that metabolic syndrome (MS) increases the salt sensitivity of BP. There is also known that salt sensitivity increases with age.

**Purpose:** The purpose of study was to assess an association between salt-sensitive hypertension and metabolic syndrome in the elderly.

**Materials & Methods:** The study enrolled a total of 158 ethnically Georgian patients of stage I essential hypertension (JNC VIII). 72 of them were middle-aged (38-62 year old, 42 females and 30 males) and 86 were elderly (65-75 years old, 47 females and 39 males). Anthropometry, blood pressure monitoring, and 24 hr urinary sodium excretion were performed. All subjects were tested for salt-sensitivity. MS was classified as recommended by the International Diabetes Federation-IDF9.

**Findings:** Our results have shown that all subjects consumed high amount of sodium chloride. Salt sensitivity was detected in 41 (57%) of hypertensive middle-aged (24 i.e. 58.5% of them were females) and in 62 (72%) of hypertensive elderly patients (44 i.e., 70.9% females). MS was detected in 18 (25%) of hypertensive middle-aged (11 (61%), of them were females and 14 (77.7%) were salt-sensitive) and 46 (53.4%) of hypertensive elderly patients (34 (73.9%) of them were females and 39 (84.7%) were salt-sensitive). A high prevalence of salt-sensitive hypertension was revealed in women and positive correlation of salt-sensitivity with age was found ( $r=0.64$ ,  $p<0.05$ ).

**Conclusions:** High incidence of salt-sensitivity and prevalence of salt-sensitive hypertension associated with high sodium intake has been detected in Georgian hypertensive subjects. High sodium consumption in salt-sensitive hypertensive patients of Georgian nationality is closely linked with higher incidence of MS. There is a high prevalence of metabolic syndrome in the elderly, especially in women.

**Recent Publications:**

1. Singer, M., Deutschman, C., Seymour, C., Shankar-Hari, M., Annane, D., Bauer, M., Bellomo, R., Bernard, G., Chiche, J., Coopersmith, C., Hotchkiss, R., Levy, M., Marshall, J., Martin, G., Opal, S., Rubenfeld, G., van der Poll, T., Vincent, J. and Angus, D. (2016). The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*, 315(8), p.801-810.
2. Masson, S., Caironi, P., Fanizza, C., Thomae, R., Bernasconi, R., Noto, A., Oggioni, R., Pasetti, G., Romero, M., Tognoni, G., Latini, R. and Gattinoni, L. (2015). Erratum to: Circulating presepsin (soluble CD14 subtype) as a marker of host response in patients with severe sepsis or septic shock: data from the multicenter, randomized ALBIOS trial. *Intensive Care Medicine*, 41(9), pp.12-20.
3. Koch, A., Nilsen, R., Eriksen, H., Cox, R. and Harthug, S. (2015). Mortality related to hospital-associated infections in a tertiary hospital; repeated cross-sectional studies between 2004-2011. *Antimicrobial Resistance and Infection Control*, 4(57).
4. Komorowski, M., Celi, L., Badawi, O., Gordon, A., and Faisal, A. (2018). The Artificial Intelligence Clinician learns optimal treatment strategies for sepsis in intensive care. *Nature Medicine* 24: 1716-1720.

24<sup>th</sup> World Congress on **Pharmacology**  
&  
**7<sup>th</sup> World Heart Congress**

August 19-20, 2019 Vienna, Austria

---

**Biography**

Irina Andronikashvili is an Associate Professor in the Department of Internal Medicine, Tbilisi State Medical University. Her scientific interest is etiology and pathophysiology of hypertension, particularly mechanism of development salt sensitivity and salt sensitive essential hypertension, elaboration of adequate methods of treatment and prevention. She is a Member of Georgian and European Societies of Cardiology.

**Notes:**