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The effect of magnesium on arterial hypertension and arterial stiffness

Introduction: Magnesium has wide range of beneficial aspects in a body like vasodilator effects, antiarrhythmic effects, glucose metabolism, oxidative stress, proinflammatory state etc. The use of magnesium may promote also lowering blood pressure. Magnesium is potent blocker of calcium channels and it prevents influx of calcium into blood stream. Our clinical experience has shown significant beneficial effect of magnesium infusion in acute hypertension crisis as well as in chronic arterial hypertension using magnesium as supplement.

Objective: The objective of this study was to determine the influence of magnesium on arterial hypertension and arterial stiffness values.

Material & Method: Total of 375 mg of magnesium direct granulates was used as a powder orally in a therapy of grade I arterial hypertension. The estimation of cardiovascular risk factors was performed in all examined patients and two groups were formed. One group included new onset of hypertensive patients and the control one also hypertensive new patients. They all required lifestyle medication where magnesium direct was given to investigative group. The open outpatient controlled prospective study was designed and effectiveness was analyzed after 2 weeks of treatment.

Results: Preliminary results obtained have shown the efficiency of magnesium in lowering the blood pressure and arterial stiffness values.

Conclusion: This finding is an additional evidence for the positive effect of magnesium on the arterial hypertension and arterial stiffness. Therapy of arterial hypertension should include magnesium supplementation as well.

Recent Publications

1. Skrzek A, Stolarz Skrzypek K and Czarnecka D (2017) Magnesium supplementation in patients with hypertension. Journal of Hypertension doi: 10.1097/01.hjh.0000523325.02079.11.
2. Cunha A R, Umbelino B, Correia M L and Fritsch Neves M (2012) Magnesium and vascular changes in hypertension. International Journal of Hypertension. 2012:754250.
3. Kisters K, Gremmler B and Hausberg M (2006) Magnesium and arterial stiffness. Hypertension 47(2):e3.
4. Rosanoff A (2005) Magnesium and hypertension. Clin Calcium 15(2):255-60.
5. Houston M (2011) The role of magnesium in hypertension and cardiovascular disease. J Clin Hypertension 13:843-847.

Biography

Sekib Sokolovic is a Professor of Internal Medicine at Medical Faculty of Sarajevo and Cardiologist at Sarajevo University Clinical Center. He is a European Hypertension Specialist and Director of National Training in Cardiology and Director of the Excellence Center in Arterial Hypertension. His expertise is in arterial stiffness, vitamin D, arterial hypertension, microcirculation and pulmonary arterial hypertension. He is an invited speaker worldwide and key speaker as well.

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