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Chitosan reduces hypertensive toxicity of the NaCl: Results of a randomised double blind cross over clinical trial

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Study Context: Hypertensive patients have difficulties to reduce salt intake and one new strategy is not only to reduce the salt quantity but also its hypertensive toxicity.

Main Objective: The main objective was to compare the decrease of the high blood pressure (HBP) parameter with Symbiosal (NaCl + Chitosan 3%) and with NaCl during the diet and lifestyle improvement period before an eventual antihypertensive treatment.

Study Design: A double blind, randomized, cross over, controlled clinical trial of Symbiosal (NaCl + Chitosan 3%) vs. NaCl on two groups of 20 patients during two periods of 8 weeks was done. Inclusion criteria: Men and women older than 18 years presenting a mild hypertension defined by a SBP between 140-159 mmHg and a DBP between 90-99 mmHg; and having never been treated with an antihypertensive drug.

Results: 40 patients were included and the effect of Symbiosal appeared as soon as the first period of the cross over showing a decrease of the SBP from 149.2±4.9 mmHg to 136.1±9.5 mmHg in patients for which Symbosial was available (decrease of 13.1±10.8 mmHg) versus a decrease from 149.7±4.6 mmHg to 142.9±7.7 mmHg in patients eating traditional NaCl (decrease of 6.8±7.5 mmHg) (p=0.0404). Similar results were observed with DBP with a decrease of 11.2±7.4 mmHg vs. 7.0±8.0 mmHg (p=0.0560). HBP was controlled (SBP≤140 and DBP≤90) in respectively 76.2% (16/21) vs. 36.8% (7/19%) (p:0.0119). The cross over analysis on the two periods confirmed the results. The salt intake was relatively moderate in both groups: 2.9±1 g/d vs. 3.0±1.5 g/d (p: 0.9412 NS).

Conclusion: Switching traditional NaCl by Symbiosal significantly contributes to a better control of hypertension in association to the lifestyle and diet recommendations and may delay the prescription of antihypertensive drugs.

Biography

Francois Andre Allaert is a Medical Doctor specialized in Public Health, completed his PhD in Biostatistics and Pharm D. He is strongly involved in the field of Medical Evaluation and especially in the evaluation of health claim. He is managing a human clinical center specifically approved by French health authorities for food supplement and enriched food evaluation. He is also managing the Chair for Health Claim Medical Evaluation at the Burgundy University of Dijon. He authored more than 1500 scientific oral communications and publications among which 210 are PubMed referred.

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