

GLISODIN® †, A VEGETAL SOD WITH GLIADIN, AS PREVENTATIVE AGENT VS. ATHEROSCLEROSIS, AS CONFIRMED WITH CAROTID ULTRASOUND-B IMAGING

M. Cloarec (1) P. Caillard (2), J.-C. Provost (3),
J.-M. Dever (4), Y. Elbeze (5), N. Zamaria (6)

SUMMARY: Prevention of cardiovascular disease should target high-risk subjects based on genetic/familial factors, blood chemistry, blood pressure, body mass index (BMI), and a history of/or current cigarette smoking. We selected active adults (n=76) aged 30-60 and investigated these risk factors, in order to recommend preventive measures. Another interesting variable is the preclinical status or atheroma of the arterial (carotid) wall or lumen. We also investigated the presence of oxidative stress in, and the anti-oxidant status of these subjects. We studied the anti-oxidative efficacy of superoxide dismutase (SOD) and variations of malondialdehyde (MDA). Supplementation with GliSODin®, a vegetal SOD associated with gliadin, was effective in controlling the thickness of the carotid artery intima and media layers as measured by ultrasonography-B. We could demonstrate the preventive efficacy of GliSODin at a preclinical stage in subjects with risk factors of cardiovascular disease.

Abbreviations: SOD: superoxide-dismutase; IMT: intima media thickness; ECG: electrocardiogram; qd: once daily; CRP: C-reactive protein; MDA: malondialdehyde; GPx: glutathione peroxidase.

INTRODUCTION

Oxidative stress is known to be a risk factor of atherothrombosis (1-2). A number of studies have attempted to demonstrate the efficacy of anti-oxidants in primary prevention of this condition (3). The recent introduction of ultrasonography-B for the detection of the early stages of arterial damage is a major advance for detecting the preclinical stages of atherothrombotic disease (4-5). It is now possible to identify and study populations at risk, have a precise appreciation of their anti-oxidant status, measure the intima/media thickness of their carotid arteries (6), and evaluate the effects of the anti-oxidant supplementation with GliSODin, the first orally effective SOD (7-11). This new automated technology is a major improvement in primary prevention and it helps to appreciate

the eventual important role played by anti-oxidants in this prevention; it allows for a follow up on carotid arteries, with an automated method that measures the intima-media thickness.

MATERIAL AND METHODS

Subjects and Design of Study

The population selected for the study was made of seventy-six patients without clinical signs/symptoms of cardiovascular disease, but who were considered to be at risk because of:

- Family history of stroke;
- Height/weight ratio >20-30% above normal range, considering BMI.

Inclusion criteria included:

- Systolic arterial blood pressure >160mm Hg
- Diastolic arterial blood pressure: >90mm Hg;
- Total serum cholesterol: >2.5g/l;
- Serum triglycerides: >1.28g/l;
- LDL Cholesterol: >1.4g/l;
- Intima media thickness: >0.7mm.

All these values are considered to be associated with a significant clinically-relevant risk of atherothrombosis (1).

(1) Association Nationale de Prévention Médicale (ANPM) - 14, rue de l'Abbé Grégoire - F-75005 Paris.

(2) Centre d'explorations fonctionnelles vasculaires - 1, rue Saint Antoine - F-75004 Paris.

(3) Groupe SYNARC - 1, rue de la Cristallerie - F-92310 Sèvres Cedex.

(4) Centre interprofessionnel d'étude et d'examen médicaux - 15, rue Jean Bart, F-75006 Paris.

(5) Centre C7ur Risque Prévention, Hôpital Américain - 63, boulevard Victor Hugo, BP 109 - F-92202 Neuilly Cedex.

(6) Chef du laboratoire biologique d'étude du stress oxydant - 49, avenue de Versailles - F-75016 Paris.