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PHYTOSTEROLS IN MILK AS A DEPRESSOR OF PLASMA CHOLESTEROL LEVELS: EXPERIMENTAL EVIDENCE WITH HYPERCHOLESTEROLEMIC PORTUGUESE SUBJECTS

Sonia Gonçalves A.^{1*}, A. Vasco Maria², Ana S. Silva¹, J. Martins-Silva¹ and Carlota Saldanha

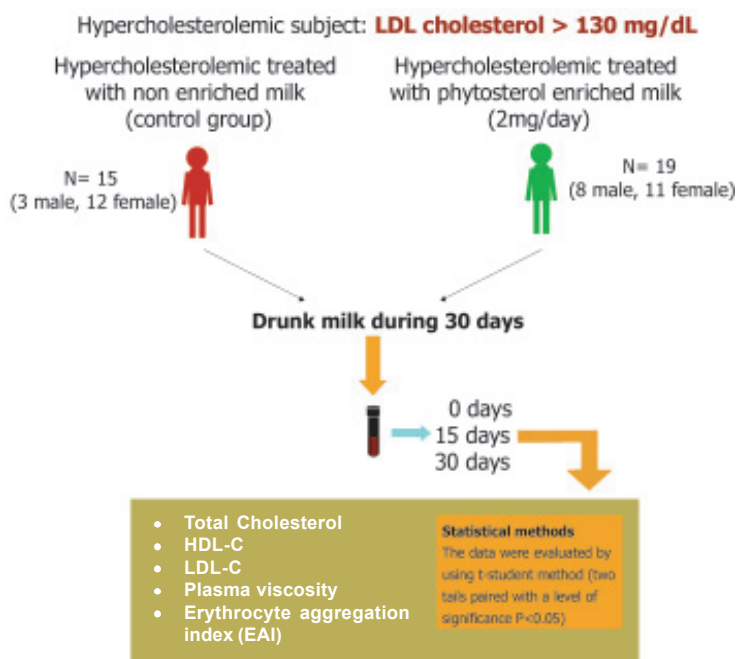
¹ Instituto de Biopatologia Química, Unidade de Biopatologia Vascular, Instituto de Medicina Molecular, Faculdade de Medicina de Lisboa, 1649-028 Lisboa Portugal.

² Instituto de Medicina Preventiva, Faculdade de Medicina, 1649-028 Lisboa Portugal
• sabreu@fm.ul.pt

INTRODUCTION

Cholesterol is a lipid that forms deposits in the wall of the blood vessel. Artery-clogging plaques may formed when among others factors, cholesterol levels become elevated, blood vessels may become blocked and unable to supply blood to the heart or brain, triggering a heart attack or stroke. Plant sterols have been reported to decrease plasma concentrations of cholesterol without any side effects. The aim of this work is to show the effect of phytosterol milk containing in the lipidic profile and hemorheological parameters of subjects with hypercholesterolemia.

MATERIALS AND METHODS



	Body Mass Index (Kg/m ²)	Arterial Pressure (mmHg)	Mean age (years)
Hypercholesterolemic treated with non-enriched milk	26 ± 4	131/77	53 ± 9
Hypercholesterolemic treated with phytosterol enriched milk	27 ± 4	129/77	55 ± 11



RESULTS

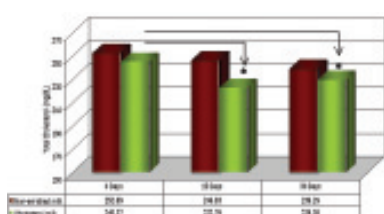


Figure 1. Effect of phytosterol non enriched and enriched milk on mean of TOTAL CHOLESTEROL concentrations of hypercholesterolemic subjects (* P<0.05).

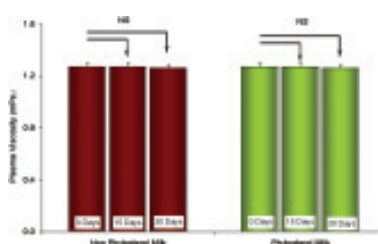


Figure 4. Effect of phytosterol non enriched and enriched milk on mean of PLASMA VISCOSITY in hypercholesterolemic subjects (NS no significative).

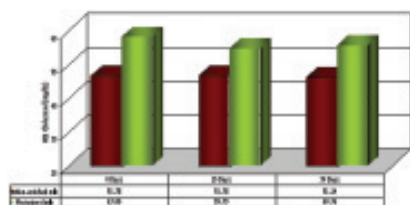


Figure 2. Effect of phytosterol non enriched and enriched milk on mean of HDL CHOLESTEROL concentrations of hypercholesterolemic subjects.

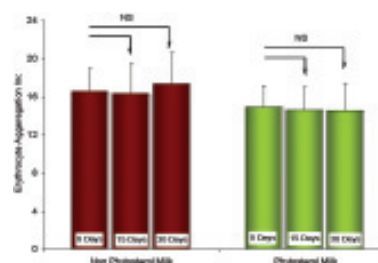


Figure 4. Effect of phytosterol non enriched and enriched milk on mean of PLASMA VISCOSITY in hypercholesterolemic subjects (NS no significative).

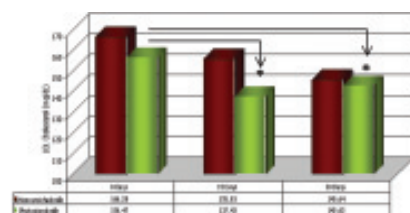


Figure 3. Effect of phytosterol enriched and non-enriched milk on mean of LDL CHOLESTEROL concentrations of hypercholesterolemic subjects (* P< 0.05).

CONCLUSIONS

- After fifteen and thirty days of the study hypercholesterolemic subjects treated with non-enriched and enriched milk did not show changes statistically significant in the plasma viscosity levels and in the erythrocyte aggregation index.
- Hypercholesterolemic subjects treated with phytosterol enriched

milk show after fifteen days of treatment statistically significant decrease in their Total cholesterol and LDL cholesterol concentrations by 10.08%; $P < 0.05$ and 12.74%; $P < 0.05$, respectively. After thirty days, the values did not change significantly compared to the results obtained at fifteen days.

- Hypercholesterolemic subjects treated with non-enriched milk did not show differences statistically significant after fifteen and thirty days of the trial.
- Both groups did not show statistically significant differences in their HDL-C levels during the trial.

