

## **Hypolipidemic and Platelet Antiaggregation effects of Argan Oil in Moroccan Dyslipidemic Patients**

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Lifestyle modifications such as abundant calorie-rich food and physical inactivity are responsible for the development of coronary artery disease risk factors such as dyslipidemia, platelet hyperactivation and oxidative stress. In the traditional Moroccan diet, argan oil (extracted from *Argania spinosa*, an endemic tree of south-western Morocco) is usually consumed at breakfast, especially in the south-western region of the country. Generally, argan oil is rich in unsaturated fatty acids, principally oleic and linoleic acids. Interestingly, the unsaponifiable fraction of argan oil is mainly rich in antioxidant compounds such as tocopherols. The aim of this work was to investigate the effect of argan oil consumption on blood lipids levels, platelet hyperactivity and oxidative stress in Moroccan dyslipidemic patients. Seventy dyslipidemic patients without coronary artery disease and lipid-lowering therapy were recruited. In the first diet period of 2 weeks, all patients consumed 20 g/day of butter in breakfast. In the second period of 3 weeks (nutritional intervention), all patients were randomized to two diet groups: argan group in which the 20 g/day of butter was substituted by 25 ml/day of argan oil with toasted bread for breakfast. The second group of patients (control) for whom, both argan oil and olive oil were removed from their diet while keeping the 20 g/day of butter for breakfast. At the end of the nutritional intervention period, data showed a significant change in atherogenic lipids ( $p < 0.05$ ) in the consumers group of argan oil compared to the control group; reducing total cholesterol and LDL-cholesterol and increasing HDL-cholesterol levels, but no changes in triacylglycerol level were observed. Argan oil consumption has also significantly ( $p < 0.05$ ) improved platelet aggregation and Redox statut of blood platelets in argan group compared to the control group. Argan oil is rich in UFA and also contains a non-glyceride fraction characterized by the presence of sterols, tocopherols and phenols. This composition gives it interesting biological and pharmacological properties.