

Benefits of Moroccan Argan Oil on Platelet Aggregability and Dyslipidemia in High Fat Diet Fed Rats

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Dietary fat is a key factor in cardiovascular disease prevention. It is well known that saturated fatty acids increase the risk of coronary artery disease while unsaturated fatty acids have a protective effect. Argan oil is an example of a natural product that has been used widely in the daily food and folk medicine in Morocco. This oil is extracted from the hard core of the fruit of the *Argania spinosa*. *Argania spinosa* is an endemic tree of south-western Morocco. The main traditional use of this comestible oil is for nutritional purposes. This oil is rich in unsaturated fatty acids (oleic and linoleic acids) and antioxidants such as tocopherols, polyphenols and sterols. The quality profile of its phytochemical composition suggests a potential role in the nutritional prevention of cardiovascular diseases. The aim of this study was to investigate the effect of argan oil on dyslipidemia and platelet hyper-aggregation in high fat-fed rats.

Eighteen male Wistar rats (120 g) were divided in 3 groups, and submitted during 8 weeks to the following diets: control (C); high-fat diet (HF) containing 40 % of fat (33 % saturated fat (hydrogenated coconut oil), 5 % lard and 2 % corn and rapeseed oils equally); HFAR group was fed with high fat diet where lard was substituted by 5 % of argan oil.

After 8 weeks of treatment, argan oil intake in HFAR group decreased triacylglycerol and total cholesterol levels in plasma compared with HF group. Argan oil intake also showed a significant modification of fatty acid composition in platelets phospholipids, decreasing saturated fatty acids and increasing unsaturated fatty acids levels. Consequently, platelet aggregation in HFAR group was lower as compared with HF group.