

EFFECT OF RAW CAMEL MILK ON LIPID METABOLISM IN TYPE 1 DIABETIC PATIENTS

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Treatment of lipid abnormalities in diabetes and non-diabetes is a medical dilemma as current lipid-lowering drugs cause serious side effects. Therefore, exploring natural medicines including camel milk to unravel this dilemma is important. The current study investigated the efficacy of *Sudanese Camelus dromedarius* raw milk on lipid metabolism in 30 type 1 diabetic patients for 12 months. The patients were divided into two groups. Control group (N=15 patients), received usual medical care and study group (N=15 patients), received the same medical care as for group 1, in addition to 0.5 L/day of raw *dromedary's* camel milk consumed by 250ml twice/day in the morning and evening. Camel milk proved very effective in improving lipid metabolism. It significantly reduced the bad lipids i.e. total cholesterol by 35% (from 138±52 mg/dl to 89.5±29.5 mg/dl; P<0.0001), low density lipoprotein by 78% (from 121.5±56.5 mg/dl to 27±16 mg/dl; P<0.0001), very low density lipoprotein by 33% (from 20.97±10.05 mg/dl to 13.5±5.5 mg/dl; P=0.0121) and triglycerides by 33% (from 100±51 mg/dl to 67.5±27.5 mg/dl; P=0.0121). On the other hand, camel milk significantly improved the HDL by 236.5% (from 63±37 mg/dl to 212±72 mg/dl; P<0.0001). These were in contrast to the lipid parameters of the control group, their lipid parameters was not improved. It seems that camel milk works well with the body's own restorative mechanisms to overcome the metabolic aberrations in the lipids that might result from DM and other factors. Camel milk is very well tolerated and is absolutely safe for human consumption. Conclusion, camel milk can be recommended as good an alternative treatment to lipid abnormalities and hypercholesterolemia associated with diabetes and other factors. The mechanism by which *C. dromedarius* camel milk effectively improves lipid metabolism in type 1 diabetic patients warrant further investigations.

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