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ABSTRACTS

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Nigella sativa oil extracts improves dyslipidaemia in high fat diet (HFD) animal model

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Introduction: Nigella sativa has been reported to have anti-inflammatory and antioxidative properties. We aimed to investigate the effects of Nigella sativa oil extract on the high fat diet (HFD) fed animal model. Methods: Thirty male Sprague-Dawley rats were used. Four groups (n=7) were fed with high fat diet (HFD) rat pellet orally for 10 weeks. The rats with HFD groups were subsequently randomly divided again into 4 groups. One group was continued with HFD while the other 3 groups were continued with the HFD in addition to Nigella sativa oil extract treatment at three different concentrations (0.5, 1 and 1.5 ml/kg/day) for another 4 weeks. Blood biochemical analysis and histological assessment of liver were subsequently performed. Results: Animals fed with HFD had increased aspartate aminotransferase (AST), alkaline phosphatase (ALP), albumin, cholesterol/HDL ratio, triglyceride (TG) levels, but decreased globulin, albumin/globulin ratio and high density lipoprotein (HDL) levels. Meanwhile, HFD animals treated with Nigella sativa oil extract showed a significant increase in the globulin and HDL levels, but reduced ALP, albumin, cholesterol/HDL ratio and TG levels. Nigella sativa oil extract at the higher doses displayed much better effect. Histologically the liver in all groups exhibited micro vesicular steatosis. Conclusions: Nigella sativa oil extracts improve the dyslipidaemia in animal models with HFD.

KEYWORDS: Nigella sativa, high fat diet, dyslipidaemia