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**Oxidised LDL in newly diagnosed type 2 diabetes mellitus and impaired glucose tolerance**
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**Background** - It is recognised that individuals with diabetes have a 2-3 fold increase in mortality secondary to coronary artery disease\(^1\) and individuals with impaired glucose tolerance (IGT) also share this risk.\(^2\) Factors that contribute to the endothelial cell dysfunction associated with the initiation of atherosclerosis include oxidative stress.

**Objective** - The present study examined baseline levels of biomarkers associated with atherosclerosis in people with newly diagnosed type 2 diabetes.

**Design** - Twelve subjects were recruited with either type 2 diabetes or impaired glucose tolerance diagnosed within the last 3 months, with control subjects (12) sex matched. Biomarkers and anthropometry measured included oxidized LDL, fatty acids, HbA\(_1c\), blood glucose level, insulin, C-reactive protein (CRP), weight, height, waist circumference, vitamins A and E.

**Outcomes** - The results showed significant differences between waist circumference (p=0.005), Body mass index (BMI) (p=0.01), CRP (p=0.0019) and triglycerides (p=0.035). While a small difference between oxidized LDL levels was observed, it was not statistically significant. Positive correlations emerged between oxidized LDL and HbA\(_1c\) (r=0.442, p=0.031), oxidized LDL and triglycerides (r=0.569, p=0.004), and oxidized LDL and CRP (r=0.441, p=0.031).

**Conclusion** - It is concluded that although no statistically significant difference in oxidized LDL was found between the two groups, the positive correlations found with oxidized LDL and HbA\(_1c\), CRP and triglycerides warrant further investigation. The results showed a relationship between the biomarkers of diabetes mellitus and a serum oxidized LDL level.

2. Celentano OV, Tammaro P et al Early abnormalities of cardiac function in non-insulin-dependant diabetes mellitus and impaired glucose tolerance. Amer J Cardiol 1995;76:1173-76.

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**Inhibition of platelet aggregation from people with type 2 diabetes mellitus following consumption of tomato juice**
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**Background** - Platelet hyperreactivity is one of the metabolic abnormalities found in type 2 diabetes mellitus and contributes to this population's increased risk of developing cardiovascular complications. Recently, clarified tomato juice has been shown to inhibit human platelet aggregation *in vitro*\(^1\) and in an animal model of thrombosis\(^2\).

**Objective** - The aim of this study was to determine whether the consumption of a clarified tomato juice could inhibit *ex vivo* platelet aggregation in patients with type 2 diabetes mellitus or impaired glucose tolerance.

**Design** - Twenty patients were randomly assigned to consume 250 mL of clarified tomato juice or placebo tomato-flavoured beverage daily for 3 wks. Fasting blood samples were collected at baseline and following supplementation. Platelet aggregation was monitored for 5 min following stimulation of platelet rich plasma (500 \(\mu\)L) with collagen (1 mg/L).

**Outcomes** - Following supplementation with tomato juice, platelet aggregation was significantly lower as compared to baseline (P=0.001) and compared with the placebo group (P=0.002). No difference was observed in the placebo group between baseline and post-supplementation (P=0.85).

**Conclusion** - Consumption of tomato juice may provide a safe, dietary alternative to reduce platelet activity; however, larger randomised controlled trials are needed to determine whether tomato juice can improve cardiovascular outcomes in patients with type 2 diabetes mellitus.