Assessment Of TNF Alpha in Type 2 Diabetic Patients with Lactobacillus Acidophilus

Nahla Nader

ABSTRACT

BACKGROUND:
Lactobacillus acidophilus is a probiotic strain applied in dairy products. It interacts with cells of the immune system and increases intestinal integrity with a beneficial effect on glucose homeostasis as it has been found to delay the onset of glucose intolerance, dyslipidaemia and oxidative stress in diabetic rats. Studies have shown the ability L.acidophilus to modulate the production of proinflammatory cytokines as TNF-α and IL-6 in intestinal epithelial cells.

OBJECTIVES:
To assess the level of TNF alpha in type 2 diabetic patients with L.acidophilus.

METHODS:
It is a case control study that was conducted on 100 type 2 diabetic patients, divided into group 1, including 50 type patients with atherosclerosis and group 2, including 50 patients without atherosclerosis. Investigations included serum creatinine, liver enzymes, CRP, fasting and post prandial blood glucose, HbA1C, lipid profile, albumin/creatinine ratio , stool l.acidophilus by PCR and carotid artery intima media thickness.

RESULTS:
There was a statistically significant positive correlation between PCR cut-off threshold and HbA1c (p-value =0.026), 2hr pp(p-value =0.013) and intimal media thickness(p-value =0.031) and there was a statistically significant positive correlation between TNF alpha level and HbA1c (p-value =0.015), LDL cholesterol(p-value =0.024) and intimal media thickness (IMT) (p-value =0.033).Also there was highly statistically significant positive relation found between TNF alpha level and PCR cut-off threshold (p-value <0.001).

CONCLUSION:
L.acidophilus was found to delay the onset of glucose intolerance, dyslipidaemia and oxidative stress in patients with type 2 diabetes mellitus.

Ain Shams University, Cairo, Egypt