
**Abstract**

**BACKGROUND:**
Vanadium compounds are able to reduce blood glucose in experimentally-induced diabetic rats and type 2 diabetic patients, but data about their long-term safety and efficacy in diabetic patients are scarce.

**METHODS:**
Fourteen type 1 diabetic patients received oral vanadyl sulfate (50 - 100 mg TID) for a period of 30 months. Fasting blood sugar (FBS), lipid levels, hematologic, and biochemical parameters were measured before and periodically during the treatment.

**RESULTS:**
The daily doses of insulin decreased from $37.2 \pm 5.5$ to $25.8 \pm 17.3$ units/day and at the same time the mean FBS decreased from $238 \pm 71$ to $152 \pm 42$ mg/dL. Meanwhile, there was a decrease in plasma total cholesterol without any change in triglyceride level. No significant clinical or paraclinical side effects, with the exception for mild diarrhea at the beginning of treatment, were observed during 30 months therapy.

**CONCLUSION:**
Vanadium is effective and safe for long-term use in type 1 diabetic patients.