How **Korean Red Ginseng** could have potential for improving blood glucose control in diabetes patients

Background

Theory

The effect of Korean red ginseng (KRG) on type 2 diabetes mellitus (T2DM):

Until now, there have been few clinical studies on the efficacy of red ginseng extract or powder for blood glucose control, and past studies mostly included people with T2DM or normal blood glucose levels. This study was designed to evaluate the effect of KRG supplementation on glucose control in subjects with impaired fasting glucose, impaired glucose tolerance, or newly diagnosed with T2DM and to establish clinical evidence of the glucose control effect of KRG.

Method

A randomized, double-blind, placebo-controlled clinical trial:

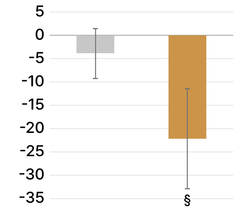
Study subjects were randomly assigned to receive placebo (corn starch, n=20) or 10 capsules of 500 mg KRG (n=21). Glucose-related biomarkers, including serum and whole blood levels of glucose, insulin, and C-peptide, were measured by 2-h oral glucose tolerance tests at baseline and after the 12-week intervention.

Outcome

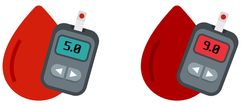
With subjects with impaired fasting glucose, impaired glucose tolerance or newly diagnosed with T2DM

Serum glucose level

Change of serum glucose at 30 min



KRG
Placebo
§P<.1



- KRG group's serum glucose levels at 30 min significantly decreased from a baseline, while the placebo group did not exhibit a statistically significant decrease.
- The KRG group trended more substantial decrease than the placebo group (P=.078).

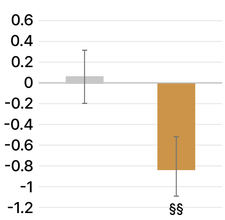
Serum glucose level

A key part of diabetes management. There is a range for adults and children to determine whether their glucose level is normal or not.

The KRG group subjects with newly diagnosed with T2DM showed a tendency toward a decrease in whole blood glucose levels at 30 min. However, the placebo group did not exhibit such a statistically significant decreases in the levels of serum and whole blood glucose.

C-peptide

Change of C-peptide at 30 min



KRG
Placebo
§§P<.05

In the KRG group, serum concentrations of C-peptide AUC significantly decreased and there was a trend toward a decrease in serum concentrations of C-peptide at 60 min. The net changes of values of C-peptide at 30 min before and after the intervention was significantly different between the KRG group and the placebo group.

C-peptide

Its concentration was determined by two-site sandwich immunoassay. Measuring C-peptide is an accurate way to find out how much insulin your body is making.

Impact

Effect of Korean Red Ginseng on Glucose control

Korean red ginseng supplementation (5 g/day) may be beneficial for **controlling serum and whole blood glucose levels compared with placebo among patients with impairing fasting glucose, impaired glucose tolerance and T2DM.**

Conclusion

The benefit of Korean Red Ginseng on glucose level

The study results indicate that **Korean red ginseng supplementation has potential for improving glucose control along with improvements in glucose-related biomarkers.**

Source: Bang H et al. "Korean red ginseng improves glucose control in subjects with impaired fasting glucose, impaired glucose tolerance, or newly diagnosed type 2 diabetes mellitus" *J Med Food.* 2014;*17*(1):128-134.