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Abstract 617: Impact Of Pterostilbene On Blood Pressure and Other Metabolic Parameters In Adults

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Objective: Pterostilbene is a polyphenol that is chemically related to resveratrol and commonly found in berries, such as blueberries. The purpose of this trial was to evaluate the effect of pterostilbene on metabolic parameters.

Methods: The trial was a prospective, randomized, double-blind, placebo-controlled study of patients with a total cholesterol ≥200 mg/dL and/or LDL ≥100 mg/dL. Patients were included if they were ≥18 years old and on either no cholesterol therapy or cholesterol medication at a stable dose for at least 2 months prior to baseline laboratory. Patients were excluded if they had significant hepatic, renal or GI tract disease or current overt cardiovascular disease; were receiving thiazolidinediones or fibric acids; were women who were pregnant or of reproductive potential. Eighty subjects were divided equally into one of four groups: (1) pterostilbene 125 mg twice daily; (2) pterostilbene 50 mg twice daily; (3) pterostilbene 50 mg + grape extract (GE) 100 mg twice daily; (4) matching placebo twice daily for 6-8 weeks. Patients received identical counseling on lifestyle intervention. Metabolic endpoints included blood pressure, body weight, and lipids. Linear mixed models were used to examine changes in metabolic parameters over time within treatment groups and compare changes over time across groups. Models were adjusted for age, sex and race.

Results: The majority of patients completed the study (73/80; 91%). The average age was 54 years. The majority of patients were female (57/80; 71%), Caucasian (56/80; 70%), and had HTN (44/80; 55%). Both systolic (-7.8 mmHg; $p<0.01$) and diastolic blood pressure (-7.3 mmHg; $p<0.001$) were reduced with high dose pterostilbene. The only change in lipids was an increase in LDL with pterostilbene monotherapy (24.9 mg/dL; $p<0.001$) which was not seen with GE combination ($p=0.47$). Presence of a baseline cholesterol medication appeared to attenuate LDL effects. Patients not on cholesterol medication (n=51) exhibited minor weight loss with pterostilbene (-0.59 kg/m2; $p=0.014$).

Conclusion: Pterostilbene reduces blood pressure in adults. Future studies should evaluate high dose pterostilbene with GE in a hypertensive population. Clinicaltrials.gov identifier NCT 01267227.

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