Original Paper

Effect of short-term dietary approaches to stop hypertension on pregnancy outcomes in gestational diabetes

Sadeghian M (B.Sc)[1], Asemi Z (Ph.D)[2], Samimi M (M.D)[3], Tabassi Z (B.Sc)[4] Saneei P (M.Sc)[5], Esmaillzadeh A (Ph.D)*[6]

[1]M.Sc Student in Nutrition, Food Security Research Center, Department of Community Nutrition, School of Nutrition and Food Science, Isfahan University of Medical Sciences, Isfahan, Iran. [2]Associate Professor, Research Center for Biochemistry and Nutrition in Metabolic Diseases, Kashan University of Medical Sciences, Kashan, Iran. [3]General Physician, Department of Gynecology and Obstetrics, School of Medicine, Kashan University of Medical Sciences, Kashan, Iran. [4]B.Sc in Nutrition, Research Center for Biochemistry and Nutrition in Metabolic Diseases, Kashan University of Medical Sciences, Kashan, Iran. [5]Ph.D Candidate in Nutrition, Food Security Research Center, Students' Research Committee, Department of Community Nutrition, School of Nutrition and Food Science, Isfahan University of Medical Sciences, Isfahan, Iran. [6]Professor, Food Security Research Center, Department of Community Nutrition, School of Nutrition and Food Science, Isfahan University of Medical Sciences, Isfahan, Iran.

Abstract

Background and Objective: Modification of life style, nutrional regiment and insulin therapy is used for improvement of pregnancy outcomes in pregnant women with gestational diabetes mellitus (GDM). This study was done to evaluate the effect of the dietary approaches to stop hypertension (DASH) eating plan on pregnancy outcomes in pregnant women with gestational diabetes mellitus.

Methods: In this clinical trial study, 52 women with GDM were randomly divided into DASH and control groups for 4 weeks. The control diet contained 45-55% carbohydrates, 15-20% protein and 25-30% total fat. The DASH was rich in fruits, vegetables, whole grains and low-fat dairy products, and contained lower amounts of saturated fats, cholesterol and refined grains with a total of 2400 mg/day sodium. The numbers of women whom commenced insulin therapy after dietary intervention, the mode of delivery and prevalence of polyhydramnios were assessed. The length, weight and head circumference of infants were measured during the first 24 h after birth.

Results: 46.2% of women in the DASH group needed to have a cesarean section, this rate for the control group was 80.8% ($P<0.05$). The percentage of those who needed to commence insulin therapy after intervention was 23% for DASH group vs 73% for controls ($P<0.05$). Infants born to mothers on the DASH group had significantly lower body weight (3222.7 vs 3818.8 g, $P<0.05$), head circumference (34.2 vs 35.1 cm, $P<0.05$) and ponderal index (2.50 vs 2.87 kg/m^3, $P<0.05$) compared to those born to mothers on the control diet.

Conclusion: Consumption of dietary approaches to stop hypertension for 4 weeks among pregnant women with GDM resulted in improved pregnancy outcomes.

Keywords: Gestational diabetes, Dietary approaches to stop hypertension, Newborn, Insulin, Cesarean section, Head circumference, Ponderal index, Body weight

*** Corresponding Author: Esmaillzadeh A (Ph.D), E-mail: esmaillzadeh@hlth.mui.ac.ir**

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