

ABSTRACT

Background: Gestational diabetes mellitus (GDM) is hyperglycemia diagnosed in the second or third trimester of pregnancy where diabetes was not previously diagnosed. GDM can be managed with blood glucose control management, which includes a healthy lifestyle, insulin therapy, and oral antidiabetic drug (OAD) medications when needed. GDM that is not managed optimally can lead to the risk of childbirth complications, one of which is abnormal growth (macrosomia, large for gestational age (LGA), and small for gestational age (SGA)).

Objective: To compare the effect of blood sugar control management on the incidence of macrosomia and LGA births in patients with diabetes mellitus.

Materials and methods: This study used a systematic review approach, in which data were collected from previous studies. Data were collected from the Science Direct database. The article search method used the characteristics of PICO (Population, Intervention, Comparison, Outcome), then compiled using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) method.

Results: Of the 20 research articles reviewed, 10 of them found an association between insulin use and a higher incidence of macrosomia, and 6 of them found an association between insulin use and a higher incidence of LGA. Both of these incidents were associated with poor glycemic control.

Conclusion: Optimal glycemic control was able to significantly reduce macrosomia and large baby outcomes in pregnancy. The use of medical nutrition therapy (MNT) and exercise in the therapeutic regimen, as well as regular monitoring of glycemic level are very important to control the patient's glycemic level, and early detection so that further therapy such as medication or insulin can be immediately administered.

Keywords: gestational diabetes, glycemic control, macrosomia, large for gestational age, diabetes therapy