OMICS Group
Accelerating Scientific Discovery
2nd International Conference and Exhibition on
Pathology
August 5-7, 2013, Embassy Suites Las Vegas, USA

Neonatal outcomes of twins according to birth weight discordance: A systematic review with meta-analysis

Andrea Cristina
University of Bari, Italy

Abstract

There is lack of agreement about the definition of inter-twin-birth-weight discordance (BWD) associated with adverse neonatal outcomes. The aim of this study was to review literature about the threshold of BWD that best predicts adverse neonatal outcomes. A search in PubMed, Embase, Cochrane, reference lists was performed from 2000 to 2012. Inclusion criteria: both twins alive at birth, BWD calculated as: (larger twin BW–smaller twin BW)/larger BW%. Exclusion criteria: omitting at least one inclusion criterion, twin-twin transfusion syndrome, and articles based on national registries. Neonatal morbidity, mortality and gestational age at delivery (GAdel) were compared with concordant twins. BWD was assessed at >15%, >20%, >25%, >30%. PRISMA guidelines were followed. Inter-studies heterogeneity was tested. Pooled odds ratio (OR), weighted mean difference (WMD) and 95%Confidence Interval (OR 95%CI) were considered statistically significant if 95%CI did not encompass 1.

Thirteen articles provided 297,693 twins se595, 385 tstwins. GAdel was shorter in discordant (35.8±3.4 weeks) than concordant (36.2±3.0 weeks; WMD: -0.76; 95%CI: -1.34/-0.19) twins when BWD was >25%. Neonatal morbidity increased as BWD enhanced from 20% (OR: 3.06; 95%CI: 2.11-4.43) to 25% (OR: 2.94; 95%CI: 1.85-4.67) and 30% (OR: 6.47; 95%CI: 2.96-14.13). Similarly, Neonatal morbidity and mortality rates are CMM adverse neonatal outcome is reported in the table. Neonatal mortality progressively increased as BWD enhanced from 20% (OR: 2.38; 95%CI: 1.51–3.75) to 25% (OR: 5.43; 95%CI: 2.62–11.26) and 30% (OR: 7.63; 95%CI: 3.84–15.14). Mortality and morbidity rates were similar between discordant and concordant twins in both monochorionic and dichorionic pregnancies.

The cut-off of BWD to identify twins at risk of adverse outcomes is 20% and is independent on chorionicity.

Biography

Andrea Cristina was born on 6 Sept 1974 in Bari (Italy). I completed my degree in medicine in 1998 and got specialization in Obstetrics and Gynecology in 2003 at University of Bari (Italy), where I am actually volunteer as research fellow. In 2004, I was research fellow with Dr Ruben Quintero in Tampa (Florida). I am Author of about 35 articles in peer-review journals.