

Children born with congenital heart defects and small for gestational age: A systematic review and meta-analysis

Ali Ghanchi^{1,2,*}, Neil Derridj^{1,3}, Damien Bonnet³, Nathalie Bertille¹, Laurent J. Salomon² and Babak Khoshnood

¹ Université de Paris, CRESS, INSERM, INRA, F-75004 Paris, France;

Service d'Obstétrique - Maternité, chirurgie médecine et imagerie fœtales, APHP, Hôpital Necker Enfants Malades, F-75015 Paris, France;

Department of Pediatric Cardiology, M3C-Necker, APHP, Hôpital Necker-Enfants Malades, F-75015 Paris, France

Abstract

BACKGROUND: Amongst congenital anomalies, congenital heart disease (CHD) is a leading cause of infant mortality. While it has been observed that small for gestational age (SGA) contributes to an increase in CHD morbidity, diverging opinions make establishing the precise disease burden difficult. A literature review and meta-analysis was carried out to determine the proportion of SGA in infants born with CHD.

METHODS: The search was carried out from inception until 31/03/2019 on Pubmed and Embase databases. Two blinded independent reviewers screened and selected studies using a predetermined data extraction form to obtain data. Bias was assessed using the Critical Appraisal Skills Programme cohort study checklist.

RESULTS: The database search identified 1783 potentially relevant publications, of which 38 studies were found to be relevant to the study question. A total of 18 studies contained sufficient data for a meta-analysis using a random effects model. It was found that the pooled proportion of SGA in all CHD was 20% (95% CI 16% to 24%) and 14% (95% CI 13% to 16%) for isolated CHD. Great variation in the proportion of SGA was found for different CHD subgroups. The majority of included studies were population-based studies published after 2010.

Keywords—Congenital heart defects, Population-based study, Small for gestational age, Systematic review and meta-analysis,

Biography:

Ali Ghanchi completed his midwifery training at Nimes school of Midwifery, France. He received a MPH (global health) from Manchester University, U.K. in 2014 and is currently enrolled in a PhD at the University of Paris, France. The theme of his research is Congenital heart defects and fetal growth restriction..



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