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Right-heart dysfunction in women with congenital heart disease and pre-eclampsia

We read with interest the systematic review and meta-analysis on perinatal complications among pregnant women with congenital heart disease (CHD), by Martinez-Portilla *et al.*¹. The authors conclude that, apart from in a subpopulation of women with aortic stenosis, the incidence of pre-eclampsia is not increased in women with CHD. It is surprising that, in this systematic review, not one report is included of the important ZAHARA (Zwangerschap bij Aangeboren HARTAfwijkingen, translated as Pregnancy in Congenital Heart Disease) publications by the Dutch consortium of the University Hospitals of Groningen, Amsterdam, Rotterdam, Utrecht, Nijmegen and their affiliated hospitals. It is even more surprising that one of the most important findings from this consortium is not evaluated in the meta-analysis: the association between right-heart dysfunction and pregnancy/perinatal outcome. This association was identified in women with corrected tetralogy of Fallot² or aortic coarctation³, in whom abnormal right-heart function was demonstrable before conception on both cardiosonography⁴ and cardiac magnetic resonance imaging⁵. Right-heart dysfunction is an intrinsic feature of pre-eclampsia^{6,7}, as is venous hemodynamic dysfunction^{8,9}. It is well known that pre-eclampsia is a risk factor for cardiovascular disease later in life¹⁰. Heart failure presents more commonly with preserved ejection fraction in women than in men¹¹, and this is associated with right atrial remodeling and subsequent tricuspid regurgitation¹². In the evaluation of the association between cardiac (dys)function and pregnancy outcome, we believe that functional assessment of the right heart is mandatory. We invite the authors to add this assessment to their meta-analysis to see whether their conclusion regarding the lack of an association between CHD and adverse maternal/perinatal outcome persists.

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