Primary electrical remodeling due to fetal growth restriction at preadolescent age

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Objective
Fetal growth restriction (FGR) is associated to cardiac remodeling and dysfunction, but whether there is an impact on the electrical conduction system has been not been evaluated.

Methods
The aim of this study is to determine the presence of electrical remodeling in preadolescents born with FGR.

Results
While non-significant difference were observed in heart rate, a shorter duration of the P wave (controls mean 86.17 ms (SD11.83) vs FGR 79.82 ms (13)), PR interval (140 ms (30) vs 120 (27)) and QRS (100 ms (25) vs 90 ms (15)) were observed in FGR when compared to AGA preadolescents. TP duration in left precordial leads (V5 and V6) were also shorter. These differences persisted even after adjusting by age, gender, body mass index and cardiac dimensions.

Conclusion
Electrical remodeling is present in FGR at preadolescent age. Studies to determine whether these changes associate an increased risk of arrhythmia in later life are guaranteed.