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Neonatal and neurodevelopmental outcome of children aged 3–10 years born following assisted oocyte activation



Frauke Vanden Meerschaut ^{a,*}, Evelien D'Haeseleer ^b, Hannelore Gysels ^c, Ylenia Thienpont ^c, Griet Dewitte ^d, Björn Heindryckx ^a, An Oostra ^d, Herbert Roeyers ^c, Kristiane Van Lierde ^b, Petra De Sutter ^a


^a Department for Reproductive Medicine, University Hospital Ghent, De Pintelaan 185–1P4, 9000 Ghent, Belgium;

^b Department of Otorhinolaryngology and Head and Neck Surgery, Speech and Language Pathology, University Hospital Ghent, De Pintelaan 185–2P2, 9000 Ghent, Belgium; ^c Department of Experimental Clinical and Health Psychology, Research Group Developmental Disorders, Ghent University, Henri Dunantlaan 2, 9000 Ghent, Belgium; ^d Centre for Developmental Disorders, De Pintelaan 185–2K5, 9000 Ghent, Belgium

* Corresponding author. E-mail address: Frauke.VandenMeerschaut@UGent.be (F Vanden Meerschaut).



Frauke Vanden Meerschaut was born in Belgium in 1984 and concluded her medical studies at the University of Ghent, Faculty of Health Sciences and Medicine in 2009. Since then, she has been part of the research team of the Centre for Reproductive Medicine at the Ghent University Hospital. She is interested in different aspects of reproductive medicine. She recently started working as an obstetrician gynaecology trainee, while finalizing her PhD on assisted oocyte activation.

Abstract Assisted oocyte activation (AOA) using a calcium ionophore has been used for more than a decade following intracytoplasmic sperm injection (ICSI) fertilization failure. However, since AOA does not mimic precisely the physiological fertilization process, concerns exist about its use in human assisted reproduction. This study assessed the neonatal and neurodevelopmental outcome of children aged ≥ 3 years who had been born following AOA in our centre. Twenty-one children participated in the study (81% response rate; mean age 63.6 ± 21.07 months). Neonatal data were collected via questionnaires. Neurodevelopmental outcome was tested using the Reynell Developmental Language Scales or Clinical Evaluation of Language Fundamentals, Wechsler Preschool and Primary Scale of Intelligence or Wechsler Intelligence Scale for Children, and the Movement Assessment Battery for Children III. Behaviour was scored by the Social Communication Questionnaire, the Child Behaviour Checklist and the Teachers Report Form. For all tests and questionnaires, the mean outcomes lay within the expected ranges. These are first data on the developmental outcome of AOA children. The high response rate and the robustness of the tests support the data, which are reassuring although still considered preliminary. Therefore, AOA should still be performed only in selected couples. 

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