Press release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Niels Uldbjerg

Title of dissertation: Fetal heart rate variability

Date for defence: 26 February 2021 at (time of day): 15.30 Place: Online

Press release (Danish)

Føtal hjerte-frekvens-variabilitet

Det centrale emne for dette PhD forsvar er de små fysiologiske ændringer i hjerterytmen fra slag til slag hos fostre, også kaldt føtal hjerte-frekvens-variabilitet (FHRV). FHRV har formentlig potentiale som en ny overvågningsmetode af fostre.

Fostre der ikke vokser optimalt, ofte pga. en dårligt fungerende moderkage, udgør et stort sundhedsproblem. Omkring 43% af alle dødfødsler skyldes formentlig væksthæmning og 3% af alle nyfødte er væksthæmmede ved fødslen og for nogle af disse nyfødte er der en øget risiko for langvarige neurologiske skader.

Præcis timing af fødselstidspunktet er i dag den eneste "behandling", hvorfor disse fostre følges tæt med ultralyds-undersøgelse af blodgennemstrømningen i navlesnoren og en række kar inde i fosteret og moderen. Der foreligger dog ikke gode metoder til undersøgelser af fosterets nervesystem og dermed risikoen for hjerneskade ved væksthæmning.

FHRV udgør et vindue til fosterets nervesystem, hvilket er interessant både i forhold til foster overvågning hos bl.a. væksthæmmede fostre, men også i forhold til fosterets neurologiske udvikling.

Dette PhD-projekt undersøger hvorvidt FHRV har klinisk diagnostisk potentiale, herunder undersøges metodens validitet og dens evne til at skelne væksthæmmede fostre fra raske fostre. Desuden bidrager projektet med ny viden omkring udviklingen af nervesystemet hos det raske foster.

Ph.d.-projektet er fra Aarhus Universitet, Health og er gennemført af Anne Rahbek Zizzo, der forsvarer det d. 26. februar 2021 kl 15.30

Forsvaret af PhD-projektet er offentligt og vil pga COVID-19 restriktioner blive gennemført virtuelt. Link til virtuel deltagelse kan tilsendes ved kontakt til Anne Rahbek Zizzo. Titlen på projektet er " Føtal hjerte-frekvens-variabilitet".
Yderligere oplysninger kan fås ved kontakt til PhD-studerende Anne Rahbek Zizzo, e-mail: arz@clin.au.dk, tlf: +45 61308070

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Press release (English)

Fetal heart rate variability

The main topic of the present defence is the small physiological beat-to-beat oscillations in fetal heart rate termed fetal heart rate variability (FHRV). FHRV may have potential as a new method of fetal monitoring.

Dysfunction of the placenta and fetal growth restriction (FGR) constitutes a major health problem. Around 3% of the birth cohort suffer from growth restriction, 43% of all stillbirths are probably caused by FGR and FGR is associated with an increased risk of long-term neurodevelopmental disabilities.

Timing of delivery is the only current intervention in the course of fetal growth restriction and frequent Doppler flow assessments of the fetal vessels constitute the keystone of fetal monitoring. However, a valid method for neurological assessment of the fetus is not available.

FHRV constitude a window into the fetal autonomic nervous system which is interesting both in relation to fetal monitoring, where fetal growth restriction (FGR) is of particular interest, but also in relation to fetal neurophysiology.

This PhD-project explore the potential of FHRV as a clinical diagnostic tool, including the validity of the method and its predictive value in regard to FGR. The PhD project also contributes with new neurophysiologic knowledge of the deveolopment of the autonomic nervous system in the healthy fetus.

The project was carried out by Anne Rahbek Zizoo, who is defending her dissertation on 26th of February 2021.

The defence is public and will due to the COVID-19 restrictions be conducted virtually. The defence takes place on the 26th of February 2021 at 3.30 pm online. The link is available from Anne Rahbek Zizzo. The title of the project is " Fetal heart rate variability". For more information, please contact PhD student Anne Rahbek Zizzo, email: arz@clin.au.dk, Phone: +45 61308070.

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