

Press release

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Basic information

Name: Louise Devantier Email: louisedevantier@clin.au.dk Phone: 61306074

Department of: Clinical Medicine

Main supervisor: Therese Ovensen

Title of dissertation: Novel assessment and visualization of vestibular function

Date for defence: 29.11.2019 at (time of day): 14.00 Place: Auditorium J116- 113, Aarhus University Hospital

Press release (Danish)

Forsvar af ph.d.-projektet "Balanceorganet og hjernens samspil"

Mere end hver fjerde dansker oplever svimmelhed i så udtalt grad, at det har medført lægebesøg, funktionsnedsættelse og evt. sygemelding. Balanceorganet er beliggende i det indre øre sammen med høresneglen. Balanceorganet leverer konstant information til hjernen om hovedets bevægelser og orientering i forhold til tyngdekraften.

Inden for de seneste år er det blevet muligt at teste funktionen af balanceorganet. Dette omfatter bl.a. Suppression Head Impulse Paradigme (SHIMP). Denne nye SHIMP-test er blev afprøvet på en gruppe af unge, og viste sig let gennemførlig.

Til trods for at testning af balanceorganet bliver mere udbredt, mangler vi fortsat viden om, hvordan hjernen behandler informationer fra balanceorganet.

Vi har afprøvet en ny metode til at vise hjerneaktivitet udløst fra balanceorganet, dels hos raske og dels hos en gruppe af patienter med sygdom i balanceorganet. Vores studier adskilte sig fra andre ved at være de første som viser hjerneaktivitet som følge af en naturlig stimulation af balanceorganet. Resultaterne har vist, at metoden virker og at den har klare fordele i forhold til tidligere metoder. Resultaterne tyder noget overraskende på, at den primære bearbejdning af informationer fra balanceorganet foregår i et område, som man hidtil har antaget bearbejder informationer fra høresneglen.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 29/11 2019 kl. 14 i auditorium J116-113, Aarhus Universitetshospital, Palle Juul-Jensen Blvd 99, 8200 Aarhus N. Titlen på projektet er "Novel assessment and visualization of vestibular function". Yderligere oplysninger: Ph.d.-studerende Louise Devantier, e-mail: louisedevantier@clin.au.dk.

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Press release (English)
Novel assessment and visualization of vestibular function

The human balance organ is located in the inner ear. The balance organ provides constant information to the brain about head movements and the heads orientation relative to gravity. In recent years, it has become possible to test different parts of the balance organ. One of these new tests is the Suppression Head Impulse Paradigm (SHIMP). This new SHIMP test has been tested on a group of adolescents and proved to be feasible. Even though testing the balance organ has become commercially available, we still lack fundamental knowledge on how the brain processes information from the balance organ. We have tested a new method to visualize brain activity elicited from the balance organ in healthy participants and in patients with a disease in the balance organ. Our studies differ from previous studies as it is the first neuroimaging study to use a natural stimulation of the balance organ. Our results show that the method works and it has clear advantages compared to previous methods. The results indicate that the primary cortical area of processing information from the balance organ is located in area which has hitherto been assumed to only process auditory information.

The project was carried out by Louise Devantier. The defence is public and takes place on 29 november 2019 at Aarhus University Hospital, Auditorium J113-116, Palle Juul-Jensen Blvd 99, 8200 Aarhus N. The title of the project is Novel assessment and visualization of vestibular function. For more information, please contact PhD student Louise Devantier, email: louisedevantier@clin.au.dk.

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