

Press release

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Basic information

Name: Marie Vognstoft Hjortbak

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Department of: Clinical Medicine

Main supervisor: Hans Erik Bøtker

Title of dissertation: Disparity in the cardioprotective efficacy of ischemic conditioning strategies against myocardial ischemia reperfusion injury - Interaction with age, diabetes, aerobic capacity and antithrombotic treatment

Date for defence: July 2nd at (time of day): 13.00 Place: Aud. A, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N

Press release (Danish)

Forskelle i den kardioprotektive effekt af iskæmiske konditioneringsstrategier imod myokardiel iskæmi- og reperfusionsskade - interaktion med alder, diabetes, aerob kapacitet og antitrombotisk effekt.

Ved blodpropper i hjertet og efterfølgende behandling med ballonudvidelse opstår der et kompliceret samspil imellem mange faktorer, som alle bidrager til at hjertemusklen skades i et vist omfang. Disse faktorer kan man begrænse med en metode, som kaldes iskæmisk konditionering. Denne metode består af korte cykler af manglende ilttilførsel til hjertet inden eller under en skadelig periode af iltmangel i hjertet. Denne metode kan meget effektivt begrænse skaden i hjertet, men den er meget påvirkelig af faktorer som alder, anden sygdom eller medicinering. Dette projekt af Marie Vognstoft Hjortbak har i rotter og mennesker undersøgt nogle af de sammenhænge, som kan have en betydning for effektiviteten af iskæmisk konditionering.

Konklusionerne baserer sig på tre studier, der viser at alder, tilstedeværelse og sværhedsgrad af diabetes mellitus type 2, aerob kapacitet og blodfortyndende medicin alle kan interagere med og påvirke effekten af iskæmisk konditionering. Dette kan have betydning for effekten af iskæmisk konditionering i mennesker.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 02/07 kl. 1300 i auditorium A, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, Aarhus N. Titlen på projektet er "Disparity in the cardioprotective efficacy of ischemic conditioning strategies against myocardial ischemia reperfusion injury - Interaction with age, diabetes, aerobic capacity and antithrombotic treatment. Yderligere oplysninger: Ph.d.-studerende Marie Vognstoft Hjortbak e-mail: hjortbak@clin.au.dk.

Bedømmelsesudvalg:

Professor Sandrine Lecour, PharmD, PhD, Hatter Institute for Cardiovascular Research in Africa, Department of Medicine, Faculty of Health Sciences, University of Cape Town, Cape Town, South Africa

Associate professor and Chief Medical Officer Anna-Marie Bloch Münster, MD, PhD, Department of Clinical Biochemistry, Hospital of South West Jutland, Esbjerg, Denmark

Professor Ebbe Bøtkjer (Chairman), MD, PhD, DMSc, Department of Biomedicine, Aarhus University

Press release (English)

Disparity in the cardioprotective efficacy of ischemic conditioning strategies against myocardial ischemia reperfusion injury - Interaction with age, diabetes, aerobic capacity and antithrombotic treatment

During a heart attack and the following reperfusion treatment by angioplasty, a complicated interplay of cellular mechanisms contribute to the final myocardial injury. The myocardial injury can be targeted by a treatment strategy called ischemic conditioning, which consists of brief episodes of ischemia and reperfusion prior to or during a lethal period of ischemia in the heart. Ischemic conditioning effectively reduces ischemia and reperfusion injury in the heart, however the method is sensitive to factors such as high age, comorbidity and comedication. This PhD project has used both rats and human data to investigate the interaction between ischemic conditioning and age, type 2 diabetes mellitus, aerobic capacity and antithrombotic medications. The interactions found may all contribute to a successful translation of ischemic conditioning to humans suffering from a heart attack. The project was carried out by Marie Vognstoft Hjortbak, who is defending her/his dissertation on 02/07.

The press release - ending with: The defence is public and takes place on 02/07 at 13.00 in Auditorium A, Aarhus Universityhospital, Palle Juul Jensens Boulevard, Aarhus N. The title of the project is Disparity in the cardioprotective efficacy of ischemic conditioning strategies against myocardial ischemia reperfusion injury - Interaction with age, diabetes, aerobic capacity and antithrombotic treatment. For more information, please contact PhD student Marie Vognstoft Hjortbak, email: hjortbak@clin.au.dk, Phone +45 22848452.

Assessment committee:

Professor Sandrine Lecour, PharmD, PhD, Hatter Institute for Cardiovascular Research in Africa, Department of Medicine, Faculty of Health Sciences, University of Cape Town, Cape Town, South Africa

Associate professor and Chief Medical Officer Anna-Marie Bloch Münster, MD, PhD, Department of Clinical Biochemistry, Hospital of South West Jutland, Esbjerg, Denmark

Professor Ebbe Bødtkjær (Chairman), MD, PhD, DMSc, Department of Biomedicine, Aarhus University

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