AARHUS UNIVERSITY

Press release

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Basic information

Name: Thomas Schmidt Voss Email: tsvo@clin.au.dk Phone: 29911146

Department of: Clinical Medicine

Main supervisor: Niels Møller

Title of dissertation: "Acute metabolic complications to type 1 diabetes; a study of hypoglycemia and ketoacidosis"

Date for defence: 16/3-2017 at (time of day): 14.00 Place: M-auditoriet, Aarhus Sygehus NBG

Press release (Danish)

"Akutte metaboliske komplikationer til type 1 diabetes - et studie af hypoglykæmi og ketoacidose"

Et nyt eksperimentelt klinisk ph.d.-projekt fra Aarhus Universitet, Health, undersøger hormonelle ændringer under lavt blodsukker (hypoglykæmi) hos raske og under insulinmangel hos frivillige med type 1 diabetes. Her vises bl.a. effekten af disse ændringer på substratmetabolisme, lipolysehastighed og insulinfølsomhed. Fundene bakkes op af regulation af specifikke proteiner som regulerer lipolyse, glucoseoptagelse og omsætning samt proteinsyntese i hhv. skeletmuskel- og fedtvæv. Projektet er gennemført af Thomas Voss, der forsvarer sin PhD grad d. 16 marts 2017

Studierne viser at både hypoglykæmi og absolut insulinmangel medfører øget lipolyse og akut insulinresistens. Desuden medfører absolut insulinmangel begyndende ketoacidose i samme grad som et tidligere studie fra Aarhus Universitet, Health hvor effekten af relativ insulin mangel og LPS-administration (sygdomsmodel) blev undersøgt.
Vores studie viser de potentielle mekanismer bag disse metaboliske ændringer.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 16 marts kl. 14 i M-auditoriet, Aarhus Universitetshospital, Aarhus Sygehus Nørrebrogade 44, bygning 3a, 2.sal. Titlen på projektet er ”Acute metabolic complications to type 1 diabetes; a study of hypoglycemia and ketoacidosis"
Yderligere oplysninger: Ph.d.-studerende Thomas Voss, e-mail: tsvo@clin.au.dk, tlf.29911146.

Press release (English)

"Acute metabolic complications to type 1 diabetes; a study of hypoglycemia and ketoacidosis"

A new experimental clinical ph.d.-project from Aarhus University, Health, investigates hormonal alterations during hypoglycemia in healthy volunteers and during total insulin withdrawal in volunteers with type 1 diabetes. The effect of these changes are described with respect to substrate metabolism, lipolysis rates and insulin sensitivity. The findings are supported by regulation of specific proteins involved with the regulation of lipolysis, glucose uptake - and metabolism and protein synthesis in both skeletal muscle and adipose tissue. The project was carried out by Thomas Voss, who is defending his dissertation on the 16th of March 2017.

According to these studies, both hypoglycemia and a complete lack of insulin causes increased lipolysis and insulin resistance. Furthermore total insulin withdrawal in type 1 diabetes causes incipient ketoacidosis to the same degree as a previous study from Aarhus University, Health. In this study, the effects of relative insulin withdrawal and LPS-administration (disease-model) was studied. Our study suggest possible mechanisms behind the above described metabolic changes during hypoglycemia and ketoacidosis.

The defence is public and takes place on 16th of March 2017 at the M-auditorium at Aarhus Universityhospital Nørrebrogade 44, building 3a, 2nd floor, Aarhus. The title of the project is Acute metabolic complications to type 1 diabetes; a study of hypoglycemia and ketoacidosis. For more information, please contact PhD student Thomas Voss, email: tsvo@clin.au.dk , Phone +45 29911146.

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