Press release

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Basic information

Name: Christina Friis Jensen Email: christina.friis.jensen@clin.au.dk Phone: 51 78 50 09

Department of: Clinical Medicine

Main supervisor: Tine Brink Henriksen

Title of dissertation: Respiratory distress syndrome in very preterm infants: Risk factors and treatment

Date for defence: 30-11-2018 at (time of day): 14.00 Place: Auditorium C114-101 (ved indgang C, plan 1), Aarhus University Hospital, Palle-Juul Jensens Boulevard 99, 8200 Aarhus N

Press release (Danish)

Lungesygdom hos meget for tidligt fødte børn: risikofaktorer og behandling

Nyt ph.d.-projekt fra Aarhus Universitet, Health har undersøgt, om lav kropstemperatur hos for tidligt fødte børn ved indlæggelse på Nyfødt Intensiv afsnit er en selvstændig risikofaktor for udvikling af lungesygdom, samt hvordan man bedst afvikler vejrtrækningsstøtte (Continuous Positive Airway Pressure (CPAP)) hos meget for tidligt fødte børn. Projektet er gennemført af læge Christina Friis Jensen, der forsvarer det d. 30/11 2018.

I Danmark fødes årligt omkring 800 børn meget for tidligt, altså før 32 ugers svangerskab. Især lungesygdom bidrager til en øget sygelighed og dødelighed hos meget for tidligt fødte børn. Flere risikofaktorer kan påvirke sværhedsgraden af lungesygdom, og nogle kan potentielt forebygges. Lav kropstemperatur ved indlæggelse på Nyfødt Intensiv afsnit anses for at være en af disse risikofaktorer, men kun få undersøgelser har undersøgt den direkte sammenhæng mellem lav kropstemperatur og lungesygdom. Hovedanalysen fra dette ph.d. projekt kunne ikke påvise, at der var nogen sammenhæng mellem lav kropstemperatur ved indlæggelse og lungesygdom. Det er muligt, at lav kropstemperatur ved indlæggelse på Nyfødt Intensiv afsnit udelukkende er tegn på kritisk sygdom hos meget for tidligt fødte børn og ikke selve årsagen til sygdommen. For yderligere at klarlægge den sammenhæng, er der behov for flere undersøgelser.
Vedrørende, hvordan man bedst afvikler vejrtrækningsstøtte (CPAP) hos meget for tidligt fødte børn sammenlignede phd. projektet to anerkendte afviklingsstrategier, trykreduktion og abrupt seponering, for at undersøge hvilken en af dem som var bedst i forhold til at sikre optimal vægtøgning. Hovedanalysen viste at de to afviklingsstrategier kunne betragtes som ligeværdige i forhold til barnets vægtøgning, men også i forhold til bl.a. varigheden af CPAP, iltbehandling og kronisk lungesygdom. Det er vigtigt at lave opfølgningsstudier, hvor man undersøger om der er forskel mellem de to afviklingsstrategier i forhold til børnenes lungefunktion.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 30/11 kl. 14.00 i auditorium C114-101 (ved indgang C, plan 1), Aarhus Universitetshospital, Palle-Juul Jensens Boulevard 99, 8200 Aarhus N. Titlen på projektet er ”Respiratory distress syndrome in very preterm infants: Risk factors and treatment ”. Yderligere oplysninger: Ph.d.-studerende Christina Friis Jensen, e-mail: christina.friis.jensen@clin.au.dk, tlf. +45 51 78 50 09.

Bedømmelsesudvalg:
Rolf Dall, overlæge, lektor, ph.d., Aarhus Universitetshospital, Aarhus, Danmark.

Henrik Verder, professor, dr.med.sci., Børne- og Ungeafdelingen, Holbæk Sygehus, Denmark

Neil Finer, professor emeritus, Departmen of Pediatrics, University of California, San Diego, USA

Press release (English)

Respiratory distress syndrome in very preterm infants: Risk factors and treatment

The project was carried out by Christina Friis Jensen, who is defending her dissertation on risk factors and treatment of respiratory distress syndrome (RDS) in very preterm infants.
Several risk factors may affect the severity of RDS, and some of them are potentially preventable. Hypothermia on admission to the neonatal intensive care unit is one of the potentially preventable factors considered to be a risk factor for developing RDS or deterioration of an exisiting RDS. However, studies investigating the association between hypothermia on admission and RDS are few. The main analysis from this PhD project showed no association between hypothermia on admission and severe RDS or death within the first 3 days of life after adjustment for risk factors preceding admission temperature. Futher studies are needed to clarify whether admission temperature is merely a proxy measure for a critically ill, very preterm infant or whether this temperature is causally related to morbidity in the preterm population.
Nasal continuous positive airway pressure (nCPAP) is a well-established treatment of respiratory distress syndrome in preterm infants. The benefits and risks of nCPAP are well described, but the optimal strategy for nCPAP weaning remains to be determined. Optimal nCPAP weaning is of great clinical importance because too early weaning from nCPAP and repeated weaning attempts may eventually cause lung injury. This PhD project compared the effect of two acknowledged weaning strategies, sudden wean and pressure wean from nCPAP on weight gain velocity in very preterm infants. Several secondary out- comes related to measures of growth, weaning attempts, nCPAP, and oxygen therapy were also studied. Overall, the results of this PhD project showed that in very preterm infants, sudden wean and pressure wean are equally good choices when early growth and respiratory support are considered; in infants born before 28 weeks, pressure wean may be preferred.

The defence is public and takes place on 30/11 at 14.00 in Auditorium C114-101, Aarhus University Hospital, Palle-Juul Jensens Boulevard 99, 8200 Aarhus N. Denmark. The title of the project is Respiratory distress syndrome in very preterm infants: Risk factors and treatment. For more information, please contact PhD student Christina Friis Jensen, email: christina.friis.jensen@clin.au.dk, Phone +45 5178 5009.

Assessment committee:
Consultant, ass prof, PhD Rolf Dall - chairman of the committee and moderator of the defense
Aarhus University Hospital, Aarhus, Denmark

Professor, dr.med.sci. Henrik Verder
Dept Pediatrics Holbaek Hospital, Holbaek, Denmark

Professor Emeritus Neil Finer
Dept Pediatrics, University of California, San Diego, USA

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