Media release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Thomas Fichtner Bendtsen

Title of dissertation: Quality and Safety of Ultrasound Guided Lumbosacral Plexus Blockade Assessed by Ultrasound/MRI Fusion

Date for defence: 12 January 2017 at (time of day): 1 pm Place: M-auditorium, Aarhus University Hospital, Nørrebrogade 44, Buiiiding 3, DK-8000 Aarhus C

Media release (Danish)

Ultralydskanning fra flanken og MR billeddannelsen forbedrer regional bedøvelse og smertebehandling af hoftekirurgiske patienter

Nyt ph.d.-projekt fra Aarhus Universitet, Health, viser, at regional bedøvelse til hoftekirurgi er en hurtigere og mere behagelig procedure, der kræver færre nåleindstik, hvis den bliver vejledt af ultralyskanning fra flanken i stedet for fra lænderyggen. Projektet viser også, at inklusion af MR billeddannelse kan øge vores forståelse af den ultralyddiagnostiske anatomi. Dette kan forbedre nuværende og fremtidige teknikker til hoftekirurgisk regional bedøvelse og smertebehandling. Projektet er gennemført af Jennie Maria Christin Strid, der forsvarer det d. 12. januar 2017.

Majoriteten af de patienter, der bliver opereret i hoften, er 65 år eller ældre. Hos disse patienter, er regional bedøvelse og smertebehandling med ultralydvejledt plexus lumbosacralis blokade mere skånsom end generel bedøvelse eller rygmarvsbedøvelse samt smertebehandling med morfin. Dog bliver blokadeanlæggelsen typisk vejledt af ultralydskanning fra lænderyggen, hvilket ofte resulterer i begrænset billeddannelse og dermed mindsket effektivet og sikkerhed af blokaden.

Det aktuelle ph.d.-projekt med raske forsøgspersoner viser, at plexus lumbalis blokade vejledt af ultralydskanning fra flanken har en kortere anlæggelsestid, kræver færre nåleindstik og er en mere behagelig procedure end traditionel plexus lumbalis blokade. Projektet viser også, at fusioneret ultralyd og MR billeddannelse samt MR-analyse af det indsprøjtede lokalbedøvelsesmiddels spredning kan øge vores forståelse af den ultralyddiagnostiske anatomi. Baseret på den nye viden, præsenteres en ny teknik til plexus lumbosacralis blokade.

Forsvaret af ph.d.-projektet er offentligt og finder sted d. 12. januar 2017 kl. 13.00 i M-auditorium, Aarhus Universitetshospital, Nørrebrogade 44, Bygning 3, 8000 Aarhus C. Titlen på projektet er ”Quality and Safety of Ultrasound Guided Lumbosacral Plexus Blockade Assessed by Ultrasound/MRI Fusion”. Yderligere oplysninger: Ph.d.-studerende Jennie Maria Christin Strid, e-mail: jmc@strid.se, tlf. 2342 0949.

Media release (English)

Ultrasound scanning from the flank and MRI improves regional anaesthesia and analgesia of hip surgery patients

New PhD project from Aarhus University, Health, shows that regional anaesthesia for hip surgery is faster to perform, requires fewer needle insertions, and is a more comfortabel procedure if it is guided by ultrasound scanning from the flank instead of from the lumbar region. The project also shows that inclusion of MRI may improve our understanding of the ultrasonoanatomy. This may be applied to

improve existing and future techniques of hip surgery anaesthesia and analgesia. The project was carried out by Jennie Maria Christin Strid, who is defending her dissertation on 12 January 2017.

The majority of patients admitted for hip surgery are 65 years or older. Regional anaesthesia and analgesia in the form of ultrasound guided lumbosacral plexus blockade are more suitble in these patients than general or spinal anaesthesia and analgesia based on morphine. However, the block is usually guided by ultrasound scanning from the lumbar region, which often results in limited visualization and hence reduced efficiency and safety of the blockade.

The current PhD project with healthy volunteers shows that lumbar plexus block guided by ultrasound scanning from the flank is faster to perform, requires fewer needle insertions, and is a more comfortable procedure than the traditional technique. The project also shows that fused ultrasound and MRI, and MRI-analysis of the spread of the injected local anaesthetic, may improve our understanding of the ultrasonoanatomy. Based on this new knowledge, a new technique for lumbosacral plexus block is presented.

The defence is public and takes place on 12 January 2017 at 1 pm in the M-auditorium, Aarhus University Hospital, Nørrebrogade 44, Building 3, DK-8000 Aarhus C. The title of the project is "Quality and Safety of Ultrasound Guided Lumbosacral Plexus Blockade Assessed by Ultrasound/MRI Fusion". For more information, please contact PhD student Jennie Maria Christin Strid, email: jmc@strid.se, Phone +45 2342 0949.

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