

Press release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Thomas Fichtner Bendtsen

Title of dissertation: Peripheral Nerve Blocks for Analgesia after Elective Total Hip Arthroplasty

Date for defence: 28th June 2019 at (time of day): 2 pm Place: Auditorium B, Aarhus University Hospital, Entrance G6, Palle Juul-Jensens Boulevard 97, DK-8200 Aarhus N

Press release (Danish)

Ny nerveblokade til behandling af smerter efter hofteprotesekirurgi

Smerter efter protesekirurgi i hoften behandles traditionelt med morfin-lignende lægemidler. Disse lægemidler har imidlertid mange bivirkninger, der kan være til gene eller fare for de nyopererede patienter. I et nyt ph.d.-projekt fra Aarhus Universitet, Health har sundhedsvidenskabelige forskere udviklet et nyt nerveblok, der har potentiale til at reducere behovet for morfin efter protesekirurgi i hoften. Projektet er gennemført af Niels Dalsgaard Nielsen, der forsvaret det d. 28/6

Mange patienter har moderate eller svære smerter efter protesekirurgi i hoften. For at undgå behandling med morfin-lignende lægemidler har en forskningsgruppe fra Aarhus Universitet undersøgt, om disse smerter kan behandles med nerveblokader. Nerveblokader kan bedøve et område af kroppen, og kan på denne måde behandle smerter i dette område uden at medføre de alvorlige bivirkninger, som ofte fremkaldes af morfin-lignende lægemidler. Mange nerveblokader bedøver imidlertid også musklerne i det berørte område. Dette er uheldigt, da patienter efter hoftekirurgi - for at opnå det bedste resultat - skal kunne gå på det opererede ben allerede på operationsdagen.

I et studie på nyopererede patienter, har forskerne undersøgt den smertestillende effekt af et etableret nerveblok - et såkaldt obturatoriusblok - som kun har en lille påvirkning af muskelfunktionen. Desværre fandt man ingen effekt af dette blok på smerterne efter hofteprotesekirurgi. Dernæst udviklede forskerne et nyt nerveblok - iliopsoas plane block - der potentielt kan bedøve nervegrenene til hoften fra en af lårets store nerver - femoralis-nerven - helt uden at bedøve lårets muskler. Dette nyudviklede nerveblok er undersøgt i to studier, og har vist potentiale til at kunne behandle smerterne efter hofteprotesekirurgi.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 28/6 kl. 14 i Auditorium B, Aarhus Universitetshospital, Indgang G6, Palle Juul-Jensens Boulevard 97, Aarhus N. Titlen på projektet er "Peripheral Nerve Blocks for Analgesia after Elective Total Hip Arthroplasty". Yderligere oplysninger: Ph.d.-studerende Niels Dalsgaard Nielsen, e-mail: nielsdn@dadlnet.dk, tlf. 2283 8334.

Bedømmelsesudvalg:

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Press release (English)

A novel nerve block for treatment of pain after prosthetic hip surgery

Pain after prosthetic hip surgery is often treated with opioids. However, this class of drugs has frequent side effects, that can be detrimental or dangerous to the newly operated patient. In a new PhD project from Aarhus University, Health, health science researchers have developed a novel nerve block that has the potential to reduce the need for opioids after prosthetic hip surgery. The project was carried out by Niels Dalsgaard Nielsen, who is defending his dissertation on 28/6.

Patients frequently have moderate to severe pain after prosthetic hip surgery. In order to avoid treatment with opioids a research group from Aarhus University has investigated whether this pain can be treated effectively with peripheral nerve blocks. Nerve blocks can anaesthetize parts of the body, and can thus treat pain in this body part without causing the serious side effects often associated with opioids. However, most nerve blocks anaesthetize both sensory and muscular function in the affected area. This is undesirable as patients preferably should ambulate on the day of surgery to achieve the best postoperative result.

The researchers examined the analgesic effect of an established nerve block - the obturator nerve block - that only has minor effect on muscle function. Unfortunately, the obturator nerve block was found to have no significant effect on pain after prosthetic hip surgery. Next, the researchers developed a novel nerve block - the iliopsoas plane block - that could potentially anaesthetize the nerve branches to the hip from one of the large nerves of the thigh - the femoral nerve - without anesthetizing the thigh muscles. The new nerve block has been examined in two studies, where it has shown potential to treat pain after prosthetic hip surgery.

The defence is public and takes place on 28/6 at 2 pm in Auditorium B, Aarhus University Hospital, Entrance G6, Palle Juul-Jensens Boulevard 97, Aarhus N. The title of the project is "Peripheral Nerve Blocks for Analgesia after Elective Total Hip Arthroplasty". For more information, please contact PhD student Niels Dalsgaard Nielsen, email: nielsdn@dadlnet.dk, Phone +45 2283 8334.

Assessment committee:

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