

Press release

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Basic information

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Department of: Dentistry

Main supervisor: Peter Svensson

Title of dissertation: A Study of Activity-Related Pain and Repeated Jaw Function in Experimental Pain Models and Patients with Temporomandibular Pain

Date for defence: 8 July 2020 at (time of day): 9:00 am Place: Via Zoom

Press release (Danish)

Smerte og funktionelle resultater i eksperimentelle modeller og patienter med kæbeledssmerter

Det er velkendt, at orofacial smerte og kæbebevægelser hænger nøje sammen. Det vides imidlertid ikke, hvordan tidsmæssig summering af gentagne bevægelser relaterer sig til kæbefunktionen ved temporomandibulære lidelser (TMD). Man kan benytte to eksperimentelle modeller, kaldet "forsinket indtrædende muskelømhed" (DOMS) og indsprøjtning med nervevækstfaktor (NGF) i kæbemusklerne til at lære mere om TMD smerter. Det overordnede formål med dette ph.d.-projekt var dels at undersøge den tidsmæssige summering af smerter i relation til kæbemotorisk ydeevne hos patienter med kroniske smerter i kæbeledet (TMJ) og diskusdisplacering uden reduktion (DDwoR), dels at sammenligne ændringen af smerter og smerterelateret kæbefunktionsadfærd i eksperimentelle NGF- og DOMS- modeller. Resultaterne kaster nyt lys over diagnose og muligheder for en mere mekanisme-baseret behandling af patienter med TMJ-smerte og DDwoR. Desuden viser resultaterne, at perifere mekanismer for smerter hovedsageligt er involveret i NGF- og DOMS-modellerne. Et nyt ph.d.-projekt fra Aarhus Universitet, Health og Nanjing Medicinsk Universitet Skole af Stomatologi, Kina. Projektet er gennemført af Yuanxiu Zhang, der forsvare det d. 8/7/2020.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 8/7/2020 kl. 9:00 via zoom. Link med adgang til forsvaret kan fremsendes ved henvendelse til Yuanxiu Zhang via nedenstående kontaktoplysninger. Titlen på projektet er "A Study of Activity-Related Pain and Repeated Jaw Function in Experimental Pain Models and Patients with Temporomandibular Pain". Yderligere oplysninger: Ph.d.-studerende Yuanxiu Zhang, e-mail:yuanxiuzhang@dent.au.dk, tlf. +45 52808001.

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Press release (English)

Pain and Functional Outcomes in Experimental Models and Patients with Temporomandibular Pain

It is well known that orofacial pain and jaw movements are closely intertwined. However, it remains unknown how temporal summation of repeated movements relates to jaw function in painful temporomandibular disorders (TMD). Two experimental models called delayed onset of muscle soreness (DOMS) and injection of nerve growth factor (NGF) in jaw-closing muscles can be used to learn TMD pain. The overall purpose of the present PhD project was to investigate the temporal summation of pain on jaw motor performance in patients with chronic painful TMJ with disc displacement without reduction (DDwoR) and to compare how the NGF and DOMS experimental models differ in terms of pain and pain-related jaw function behaviour. The findings shed light on the diagnosis and the utility of a more mechanism-driven management of patients with TMJ pain and DDwoR. Moreover, it shows that peripheral mechanisms of pain are mainly involved in the NGF and DOMS models. This is an integrated PhD programme from Aarhus University, Health and Nanjing Medical University School of Stomatology, China. The project was carried out by Yuanxiu Zhang, who is defending her dissertation on 8 July 2020.

The defence is public and takes place on 8 July at 9:00 am via zoom. Zoom link can be sent upon request from Yuanxiu Zhang. The title of the project is A Study of Activity-Related Pain and Repeated Jaw Function in Experimental Pain Models and Patients with Temporomandibular Pain. For more information, please contact PhD student Yuanxiu Zhang, email: yuanxiuzhang@dent.au.dk, Phone +45 52808001.

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