

Press release

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Basic information

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Department of: Clinical Medicine

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Title of dissertation: Quantitative elastography of the uterine cervix - A guideline and the development of a force-measuring device

Date for defence: 27.08.2021 at (time of day): 11.00 Place: Regionshospitalet Randers, Auditoriet.

Press release (Danish)

Kvantitativ elastografi af livmoderhalsen – En guideline og udvikling af en kraftmåler

Livmoderhalsens biomekaniske styrke er vigtig for et succesfuldt udfald af graviditet og fødsel. Kvinder med reduceret biomekanisk styrke vil være i øget risiko for at føde for tidligt, mens kvinder, der har en livmoderhals med øget biomekanisk styrke, vil være i risiko for overbårne graviditeter samt mislykket igangsætning af fødslen.

Elastografi blev introduceret som en ultralydsbaseret metode til at evaluere hårdheden af et givet væv. Transvaginal ultralydsskanning kombineret med elastografi har vist lovende resultater, hvad angår vurdering af livmoderhalsens hårdhed, som mål for dens biomekaniske styrke. Metoden er dog begrænset af, at den kraft, der lægges på ultralydsproben, når vævet komprimeres, er ukendt.

I et nyt ph.d.-projekt fra Aarhus Universitet, Health, undersøges om en nyudviklet kraftmåler i kombination med elastografi kan bruges til vurdering af livmoderhalsens biomekanisk styrke. I projektet indgår både kvinder med forskellig graviditetsslængde og kvinder, der kommer til igangsætning af fødslen. Derudover inkluderer ph.d.-projektet også udvikling af en guideline, som i fremtiden vil kunne forbedre elastografi, som metode til vurdering af livmoderhalsen.

Projektet er gennemført af Christine Rohr Thomsen, der forsvare det d. 27/8-2021.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 27/8-2021 kl. 11 i auditoriet v. læringscenteret, Indgang B, Regionshospitalet Randers, Skovlyvej 15, 8930 Randers NØ. Titlen på projektet er "Quantitative elastography of the uterine cervix - A guideline and the development of a force-measuring device". Yderligere oplysninger: Ph.d.-studerende Christine Rohr Thomsen, e-mail: crt@clin.au.dk , tlf. 20945183.

Bedømmelsesudvalg:

Jens Fuglsang, Overlæge, ph.d., klinisk lektor, (Chairman)
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Press release (English)

Quantitative elastography of the uterine cervix - A guideline and the development of a force-measuring device

The biomechanical strength of the uterine cervix is important for the successful outcome of pregnancy and labor. Women with reduced cervical biomechanical strength may have increased risk of spontaneous preterm birth, while women with an increased cervical biomechanical strength may experience post-term pregnancies and risk of failed labor induction.

Elastography was introduced as an ultrasound-based method for evaluating the stiffness of a given tissue. Transvaginal ultrasound combined with elastography has shown promising results concerning the evaluation of cervical stiffness that could serve as a proxy for the biomechanical strength of the uterine cervix. However, a major limitation of the method is the lack of force control.

A new PhD-project from Aarhus University, Health, investigates whether a newly developed force-measuring device combined with elastography can be used for assessing the biomechanical strength of the uterine cervix. The project includes both women with varying gestational ages and women admitted for labor induction. Furthermore, this PhD-project includes development of a guideline that may increase the future performance of cervical elastography.

The project was carried out by Christine Rohr Thomsen, who is defending her dissertation on 27 August 2021.

The defence is public and takes place on 27 August 2021 at 11 am in the auditorium, entrance B, Randers Regional Hospital, Skovlyvej 15, 8930 Randers NØ, Road, City. The title of the project is "Quantitative elastography of the uterine cervix, A guideline and the development of a force-measuring device". For more information, please contact PhD student Christine Rohr Thomsen, email: crt@clin.au.dk, Phone +45 2094 5183.

Assessment committee:

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