

Prediction of Chronic Posttraumatic Neck Pain: A Prospective Cohort Study with Biomarkers and Health Economics

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BACKGROUND AND AIMS

- ❑ 15-25% of those injured in traffic accidents experience symptoms and functional impairment one year after the accident.
- ❑ Physical and psychological factors contribute to development of chronic pain.
- ❑ Post-traumatic arousal can be objectively quantified using heart rate variability (HRV).

Aims of this current cohort study is to:

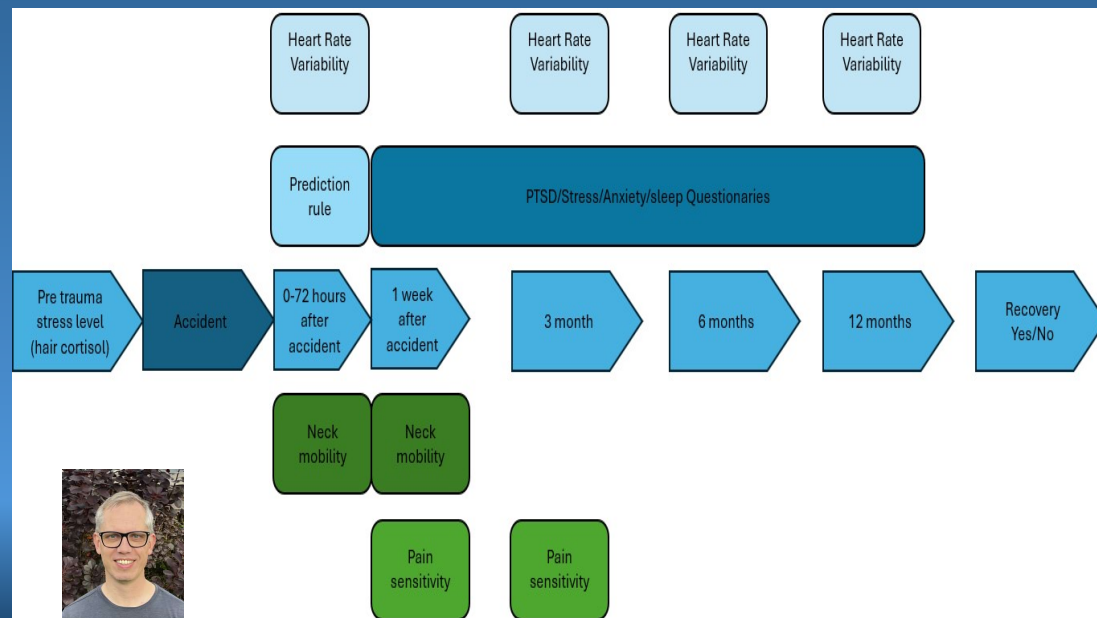
- ❑ Improve post-traumatic neck pain prediction tools by exploring whether HRV enhances accuracy of the existing screening tools.
- ❑ Evaluate health economic costs after 12 months for the group of individuals who don't improve compared to those who do.
- ❑ Investigate whether post traumatic stress disorder symptoms at three months mediates the link between low baseline HRV and pain sensitization.

METHODS

- ❑ Prospective cohort study at two Danish emergency departments.
- ❑ Participants reporting neck pain after traffic accidents will be screened for eligibility.
- ❑ Eligible participants in the acute face (i.e. <72 hours after traffic accident) will be included.
- ❑ Data will be collected at inclusion, 1 week, 3, 6, and 12 months.
- ❑ The prediction tool will be assessed using a receiver operator characteristics analysis.
- ❑ Health economy will be analysed at 12 months using labour market attachment, medicine consumption and use of health services.

RELEVANCE FOR PATIENT CARE

The results may of this project may contribute to the advancement of both national and international understanding regarding early identification of individuals at high risk of developing chronic neck pain. Furthermore, it will highlight the relevance of integrated into the evaluation of patients in the biomarkers in this context. The project represents a pioneering effort in the field of chronic neck pain following accidents. If heart rate variability proves effective in predicting the development of chronic neck pain after traffic accidents, it could easily be integrated into the evaluation of patients in the emergency room.



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