

Detailed paper information

Paper title	Safe management of people with neck pain and headache: a contemporary approach
Paper ID	13837
Submitted by	Nathan Hutting
Authors	<ol style="list-style-type: none"> 1. <i>N. Hutting</i>¹ Presenter 2. <i>R. Kranenburg</i>² Presenter 3. <i>L. Thomas</i>³ Presenter 4. <i>L. Puentedura</i>⁴ Presenter 5. <i>F. Mourad</i>⁵ Presenter <hr style="border-top: 1px dashed #000;"/> <ol style="list-style-type: none"> 1. ¹ HAN University of Applied Sciences 2. ² Hanze University of Applied Sciences 3. ³ The University of Queensland 4. ⁴ Baylor University 5. ⁵ LUNEX University
Form of presentation	A. Traditional Focused Symposium
Topics	<ul style="list-style-type: none"> • 3. Expertise in musculoskeletal and manual physical therapy
Session format and learning activities	This session will consist of five linked presentations by leading global experts on the topic. To engage the audience, online polling will be used and clinical examples will be provided. At the end of the session, an interactive 15 min Q&A, including topical

	<p>discussion with the audience, will be facilitated. Schedule of the session: Opening and introduction by the chair (5 min) Presentation 1: Serious adverse events and OMPT: what do we know? (Rik Kranenburg, 13 min) Presentation 2: Recognition of vascular pathologies in clinical practice: practical recommendations (Lucy Thomas, 13 min) Presentation 3: A contemporary physical examination: an update (Firas Mourad, 13 min) Presentation 4: Optimizing treatment approaches in people with neck pain an headache (Louie Puentedura, 13 min) Presentation 5: Safety netting and key messages for safely treating people with neck pain and headache (Nathan Hutting, 13 min) Interactive Q&A, including topical discussion with the audience (15 min) Summary and key messages (chair, 5 min)</p>
Swiss young talent award application	
Relevance & expected audience	<p>Although events and presentations of vascular pathologies of the neck are rare, they are an important consideration as part of OMPT assessment. However, evidence suggests that physical therapists, including OMPTs, do not always have sufficient knowledge to conduct an evidence-based clinical reasoning process regarding the identification of vascular pathologies or blood flow limitations. Moreover, although the implementation of the IFOMPT Cervical Framework was successful in the educational programs, implementations in practice is still a challenge and recommended in literature. This workshop will be interesting for clinicians, researchers and policymakers and will contribute to the practice of safe and contemporary OMPT.</p>
Keywords	<p>Orthopedic Manual Physical Therapy (OMPT), safety, serious adverse events, clinical reasoning</p>
Publication	<p>Part of the work that will be presented was presented on national conferences in various countries. Most of the content of this focused symposium was published in</p>

	scientific literature. The content of this focused symposium has never been presented in this format at an international OMPT conference.
Ethical approval for all studies that will be presented	Not applicable
Funding acknowledgement	Not applicable
CV Chairs and Presenters (250 words each)	<p>Dr. H.A. (Rik) Kranenburg, PT, MT, PhD Senior lecturer & researcher Hanze University of Applied Sciences, School of Healthcare studies, Physiotherapy Program, Groningen The Netherlands. Managing partner & manual therapist Fysiotherapie Hooiweg, Zuidhorn, The Netherlands Dr. Kranenburg combines teaching, the development of the curriculum, research, and clinical practice. He obtained his PhD at the medical faculty in Groningen with his thesis called: Adverse events following cervical manual physical therapy techniques. In his multidisciplinary clinic he mostly treats patients with neck complaints and headache. He is involved in numerous committees involving musculoskeletal physiotherapy. Rik has published multiple articles in peer-review journals which also informed the revised IFOMPT framework (2020).</p> <p>Dr. Emilio “Louie” Puentedura, PT, DPT, PhD, OCS, FAAOMPT Clinical Professor, Doctor of Physical Therapy Program, Robbins College of Health and Human Sciences, Baylor University, Waco, Texas, United States of America Dr. Puentedura has been involved in Orthopedic Manual Therapy for over 42 years and has lectured and presented seminars on the various approaches to Manual Therapy. After more than 10 years at the University of Nevada Las Vegas where he achieved the rank of Associate Professor, Louie joined the faculty of the Doctor of Physical Therapy program at Baylor University in Waco, Texas as a Full Professor. Louie has contributed to over 100 peer-reviewed publications and several textbooks and textbook chapters since 2010. His areas of past and current research</p>

revolve around the safety and use of thrust joint manipulation in the spine, therapeutic pain neuroscience education and mobility of the nervous system. Dr Lucy Thomas, PhD, MMedSc, Grad DipApp Sc (Manip Phty), Dip Phys, APAM Dr Thomas is a researcher, academic and Co-Director of the Neck, and Headache research unit at the University of Queensland. She is a Titled Musculoskeletal Physiotherapist and holds an honorary appointment at the Royal Brisbane and Women's Hospital. Dr Thomas has worked as a manipulative physiotherapist for 34 years and taught in OMT since 2005. She completed her PhD in 2013, 'Minimising risk factors for cervical spine manipulation' and MMedSc 'Validity of the Doppler velocimeter as a pre-manipulative screening tool for vertebral artery flow'. She led development of the Australian Physiotherapy Association (APA) 'Clinical guide to safe manual therapy practice in the cervical spine' in 2018, a national guide used by practitioners around Australia and implemented nationally into university curricula. Her research also informed the revised IFOMPT framework in 2020. Her research focuses on early identification of craniocervical arterial dissection and red flag conditions in headache and neck pain, evaluation of the role of the neck in disorders such as headache and dizziness and validating simple screening tools for the cervical region for use in clinical practice. She has been an invited keynote speaker at international and national conferences and delivers workshops and webinars lectures nationally and internationally to present her research findings. She has published widely in peer reviewed journals and contributed chapters to two textbooks on cervical spine management. She teaches extensively into undergraduate and postgraduate physiotherapy programs and supervises several doctoral students. Dr. Firas Mourad, PhD, PT, MSc, OMPT Assistant Professor in Musculoskeletal Physiotherapy Programme Leader Master in Physiotherapy Former Vice-president of the Italian Manual Therapy and Musculoskeletal Physiotherapy Association and IFOMPT MO Delegate for Italy Dr Firas Mourad was awarded an International PhD with honours in Ciencias de la Salud from the Universidad Rey Juan Carlos. Additionally, he completed an extensive manual therapy program granting the Orthopedic Manipulative Physical Therapist (IFOMPT) status from the University of Genova, a MSc in rehabilitation sciences of the health professions from the

University of Milan “La Statale”, a Post-Graduate Diploma in Sport and Exercise Medicine from the Ulster University in Belfast, and a Post-Graduate Certificate in systematic review and meta-analysis (Cochrane) from the University of Modena and Reggio Emilia. He is a guest lecturer and adjunct faculty for numerous musculoskeletal physiotherapy educational programs and conferences internationally. Dr Mourad boasts more than fifteen years of clinical experience and administration of complex multidisciplinary healthcare centers. Dr Mourad has published original experimental research, clinical trials, case reports, and literature reviews in internationally recognized peer-reviewed journals. His topics of influence are neck pain assessment and management, differential diagnosis in physiotherapy, and spinal manipulation. Dr. Nathan Hutting Nathan is an associate professor at the HAN University of Applied Sciences in the Netherlands. He also works as a physiotherapist in a private practice. He is an executive committee member of the Dutch Association for Manual Therapy and is the member organisation delegate of the Netherlands to the International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT). He is also a board member of the association VvAA, the business services provider for professionals in the Dutch healthcare sector, with over 130,000 members. His current research topics include musculoskeletal conditions, self-management, patient-centered care, shared decision making, occupational health, vascular conditions and safe treatment of the cervical spine. Nathan has published about 45 peer-reviewed articles, including about 15 publications related to safe treatment of the cervical spine. He gave many workshops and masterclasses about safe treatment of the cervical spine in many countries on four different continents. Nathan has made numerous international congress presentations and has chaired focused symposia at the World Physiotherapy congresses in 2017, 2019 and 2021. He will chair his fourth World Physiotherapy focused symposium in Dubai in June 2023. He is also an associate editor of BMC Musculoskeletal Disorders and a member of the International Advisory Board of Musculoskeletal Science and Practice. Nathan is also a member of the World Physiotherapy 2025 Congress programme committee.

Abstract text**Objective:**

Upon completion of this session, attendees will have contemporary knowledge and skills regarding identifying and management of a possible vasculogenic cause of the complaints, in patients with headache or neck pain.

Description

Neck pain is a highly prevalent condition that can lead to considerable pain, disability and economic costs. Cervical spine manipulation and mobilization are frequently used in the management of neck pain and headache. Although rare, serious adverse events following cervical spine manipulation and mobilization have been described in literature (Kranenburg et al., 2017). The current opinion with regard to vascular events is that patients presenting with neck pain and headache who develop a serious adverse vascular event (in particular, arterial dissection) during or after treatment may have an underlying pathology or flow limitation that was not recognized and was subsequently aggravated by treatment (Rushton et al., 2022; Rushton et al., 2020; Hutting et al., 2022). Additionally, some interventions or practices may impose greater stress on the cervical arteries and should be recognized.

Although events and presentations of vascular pathologies of the neck are rare, they are an important consideration as part of an Orthopedic Manual Physical Therapy (OMPT) assessment (Rushton et al., 2020). Vascular pathologies may be recognizable if the appropriate questions are asked during the patient history, if the interpretation of elicited data enables the recognition of this potential, and if the physical examination can be adapted to explore any potential vasculogenic hypothesis further (Rushton et al., 2021).

To assess and recognize a potential vasculogenic contribution, up-to-date knowledge and skills are important (Hutting et al., 2022). However, evidence suggests that physical therapists, including OMPTs, do not always have sufficient knowledge to conduct an evidence-based clinical reasoning process (including patient history and

physical examination) regarding the identification of vascular pathologies or blood flow limitations. For example, although the current explanation is that people who develop a serious adverse vascular event after OMPT have an underlying pathology or flow limitation, about 47% of the physical therapists (n=776) believe that there is an increased risk of arterial dissection after cervical spine manipulation (Thomas et al., 2011; Thomas et al., 2015; Mourad et al., in preparation). Therapists mainly focus on manipulation as a cause of serious adverse events (Mourad et al., in preparation; Mourad et al., 2021), while the evidence to support this is lacking.

Knowledge about risk factors is also lacking. For example, over 50% of the physical therapists believe that cardiovascular risk factors are associated with a high risk of carotid or vertebral artery dissection, while literature suggests that this is not true (Mourad et al., in preparation). In addition, therapists often lack the knowledge and skills to conduct a contemporary pre-treatment examination. Anecdotal evidence (based on polling among about 200 physical therapists) suggest that OMPTs mainly rely on the results of positional testing (VBI tests) (about 70% of the therapists are still using these tests to determine the risks associated with treatment), while the use of these tests is generally not recommended for this purpose (Hutting et al., 2020; Rushton et al., 2022). A recent survey found that positional testing is currently used in 30% of the patients with neck pain or headache (Mourad et al., in preparation). However, although positional testing and craniovertebral ligament testing are excluded from the IFOMPT Cervical Framework (Rushton et al., 2020; Rushton et al., 2022), most educational programs will keep these tests in their curriculum (Hutting et al., 2022). Moreover, although not recommended, a considerable number of educational programs still teach end range manipulations in the middle and lower cervical spine (33.3%) and upper cervical spine (25.5%) (Hutting et al., 2022).

Conclusion

As contemporary musculoskeletal physical therapy clinicians are evolving into more rounded, expert health care professionals in more diverse settings, they should be

aware of a potential vasculogenic contribution to the patient's complaints, and assess and refer the patient accordingly. To assess a potential vasculogenic contribution, up-to-date knowledge and skills are important. However, we can conclude that there is sufficient evidence indicating that physical therapists, including OMPTs, do not always have sufficient knowledge and skills to conduct an evidence-based clinical reasoning process regarding the identification of vascular pathologies or blood flow limitations. Therefore, this workshop will focus on contemporary practical knowledge and skills regarding clinical reasoning (including the subjective and objective examination) aimed at identifying a possible vasculogenic cause of the complaints, in patients with headache or neck pain.

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