

Common Manual Therapy Practices in the Netherlands for Infants With Upper Cervical Dysfunction: A Prospective Cohort Study

Eric R.I.C. Saedt, MT,^a Femke Driehuis, MSc,^b Thomas J. Hoogeboom, PhD,^b Bé H. van der Woude, MT,^c Rob A. de Bie, PhD,^d and Maria W.G. Nijhuis-van der Sanden, PhD^b

ABSTRACT

Objective: The purpose of this study was to describe common clinical practices of manual therapists (MTs) in the Netherlands for infants with indications of upper cervical dysfunction (UCD).

Methods: A prospective observational cohort study was conducted to gain insight into characteristics, reasons for seeking care, and common clinical practice for infants (<27 weeks) with indications of UCD, referred to MTs. Pre- and posttreatment self-reported questionnaires were used to collect data from parents and MTs. Parents reported on infant characteristics and perceived effect of treatment. Manual therapists reported on diagnostics, therapeutic procedures, and outcomes.

Results: Between 2006 and 2007, data regarding 307 referred infants (mean age: 11.2 weeks) were collected by parents and 42 MTs. The most frequent reasons for seeking care were positional preference, restlessness, and/or abnormal head position. Manual therapists observed active, spontaneous, and provoked mobility and passive upper cervical mobility. Of the 307 infants, 295 were diagnosed with UCD based on positive outcomes on the flexion-rotation test and/or lateral flexion test. After treatment with mobilization techniques, positive outcomes on the flexion-rotation test decreased from 78.8% to 6.8%. For the lateral flexion test, the positive outcomes decreased from 91.5% to 6.2%. All parents perceived positive treatment effects. No serious adverse events were reported during this study.

Conclusions: This is the first study to describe common clinical practice for infants referred for manual therapy. Infants with UCD were treated mainly with upper cervical mobilization techniques, and the greatest perceived effect was observed after approximately 2 treatment sessions. (*J Manipulative Physiol Ther* 2017;xx:1-10)

Key Indexing Terms: *Physical Therapy Modalities; Musculoskeletal Manipulation; Infant*

INTRODUCTION

Many infants are treated by manual therapists. In the Netherlands, manual therapists (MTs) are physical therapists with an additional postgraduate clinical education in manual therapy. Some MTs have received complementary

education concerning manual therapy in infants and register their treatment sessions yearly.¹ Between 2006 and 2015, almost 75 000 infants were treated by MTs for posture asymmetry and/or dysfunction of the upper cervical spine.² Manual therapists apply only gentle spinal mobilization techniques; high-velocity thrust manipulation is avoided because of the risk of adverse events.^{3,4} Although a large number of infants are referred for manual therapy yearly,² the therapeutic procedure and process of clinical reasoning in common practice are still scarcely described.

In the Netherlands, the therapeutic approach is based mainly on the KISS (kinematic imbalance due to suboccipital strain) concept, originally described by Gutmann as “diencephalon syndrome,”⁵ and described as KISS by Biedermann.⁶ The literature describes the KISS concept as a reversible biomechanical upper cervical dysfunction. This dysfunction is regarded as the underlying cause of reduced mobility in the upper cervical spine,⁷ and would lead to an antalgic and biomechanical positional preference (PP) of the head and postural asymmetry.⁶⁻¹⁰ In addition, the biomechanical upper cervical dysfunction results in reduced

^a Practice for physical and manual therapy, Saedt and Daanen, Ravenstein, The Netherlands.

^b Radboud university medical center, Radboud Institute for Health Sciences, IQ Healthcare, Nijmegen, The Netherlands.

^c Practice for manual therapy and (pediatric) physical therapy, Boxmeer, The Netherlands.

^d Department of Epidemiology, Caphri research school, Maastricht University, Maastricht, The Netherlands.

Corresponding author: Femke Driehuis, MSc, Radboud university medical center, IQ Healthcare, internal route 114, P.O. Box 9101, 6500 HB, Nijmegen, The Netherlands. Tel.: +31 (0)24 36 15 305. (e-mail: Femke.Driehuis@radboudumc.nl).

Paper submitted May 26, 2016; in revised form August 1, 2017; accepted August 23, 2017.

0161-4754

© 2017 by National University of Health Sciences.

<https://doi.org/10.1016/j.jmpt.2017.08.003>

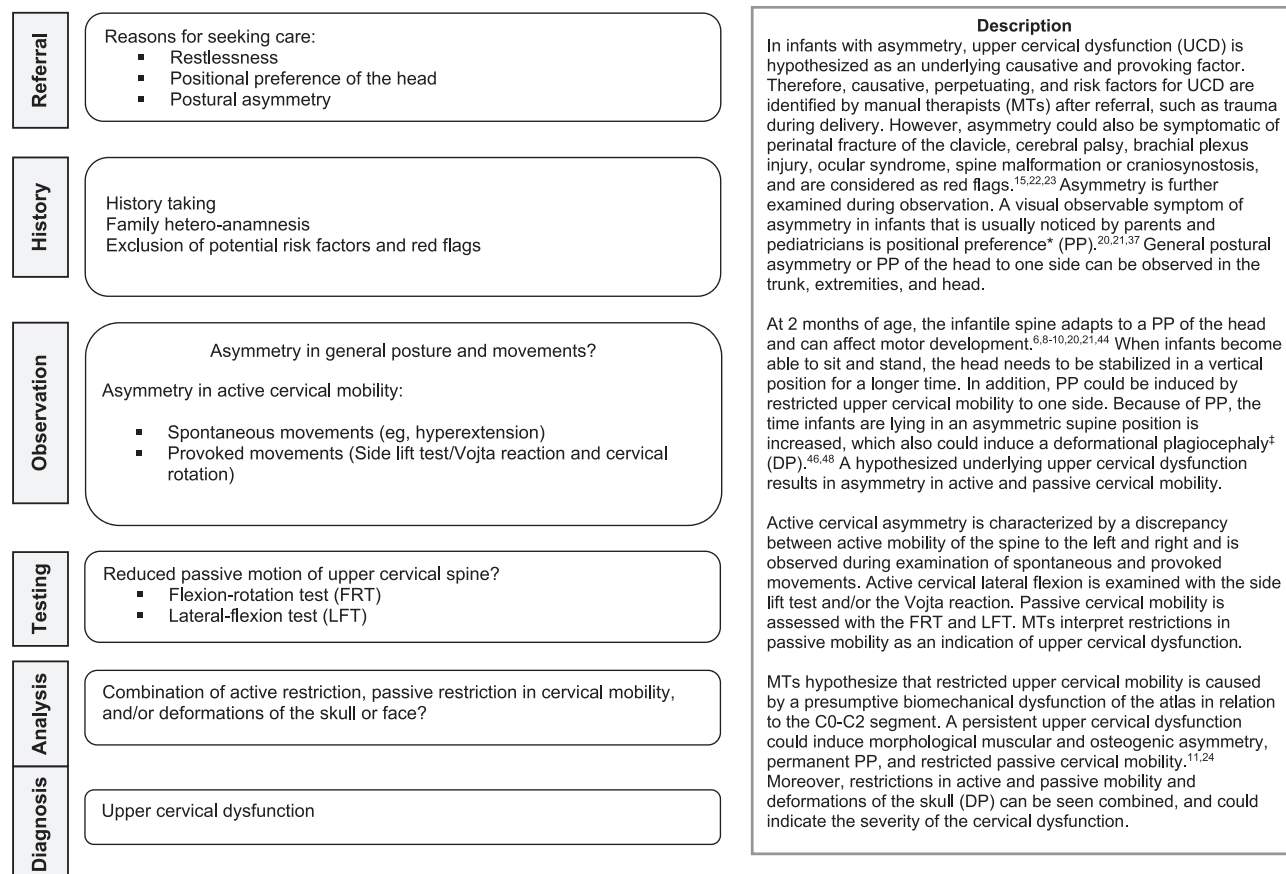


Fig 1. Model of clinical reasoning of manual therapists in the treatment of infants. *PP (positional preference) is defined as showing head rotation to either the right or left side in supine position for a minimal three-quarters of a day, and which can be observed for 15 minutes during examination, combined with no active rotation of the head over the full 180°. ‡DP (deformational plagiocephaly) is defined as observed head and/or facial asymmetry and flattening of the occiput, as a result of pre- and/or postnatal forces on the growing skull, and cervical rotation restriction toward the nonflattened side.

active and passive cervical joint mobility.¹⁰ Upper cervical dysfunction (UCD) can be described as a fixed posture toward lateral flexion and contralateral rotation, combined with passive and active restricted cervical range of motion.⁷ The underlying rationale in clinical reasoning is provided in Figure 1. However, evidence validating the assumptions is scarce. In this study, we describe UCD as a biomechanical dysfunction of the upper cervical spine and explore its consequences in infants.

The aim of this prospective cohort study was to gain insight into the patient characteristics and reasons for seeking care in infants with indications of UCD referred for manual therapy and to describe the diagnostic and therapeutic procedures and treatment outcomes in a transparent way. This study focused only on manual therapy in infants as a treatment for posture- and movement-related disorders from a primary biomechanical point of view. Therapeutic procedures based on different underlying constructs for treatment, such as chiropractic and osteopathy, fall outside the scope of this article. This

article describes clinical practice in manual therapy in infants in the Netherlands and does not draw any conclusion about effectiveness.

METHODS

Study Design and Procedure

This descriptive study was based on prospective observational data sampled from a clinical cohort between 2006 and 2007, collected by parents and MTs. All registered MTs (n = 239) specially educated in treatment of infants¹ were invited to participate in the study and asked to recruit parents/caregivers of referred infants. Participating MTs informed parents/caregivers (“parents”) about the study, including the option to withdraw without consequences from treatment of the infant. Informed consent had to be signed by parents prior to study participation. The ethics review and approval for this study was completed by the Dutch Central Committee of Research Involving Human Subjects (CCMO: dd. March 15, 2007).

Download English Version:

<https://daneshyari.com/en/article/8560090>

Download Persian Version:

<https://daneshyari.com/article/8560090>

[Daneshyari.com](https://daneshyari.com)