

Ethical Considerations Surrounding the Use of Cervical Spinal Manipulation Therapy for Patients with Chronic Neck Pain

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Introduction

Cervical spine manipulation therapy (cSMT) is a high velocity thrust technique, commonly performed by chiropractors and physiotherapists, in an attempt to alleviate chronic neck pain. The procedure is a matter of contention among medical professionals due to its uncertain safety profile. It has been criticized for having low quality evidence to support its efficacy, as well as the potential to cause major neurovascular complications, including cervical arterial dissection (CAD). Due to the lack of randomized controlled trials and conflicting opinion papers, researchers have been unable to prove a causal relationship between cSMT and neurovascular complication. Without evidence of direct causality, cSMT continues to be performed over more conservative, first-line treatments, such as home exercise and analgesia (HEA). In the USA, cSMT is even covered by public and private payors.

Is the benefit of cervical manipulation worth the potential risk? And if so, at what point should cSMT be considered over more conservative treatments? We used Beauchamp and Childress' four moral principles to assess the moral permissibility of cSMT for chronic neck pain.

Beauchamp & Childress' Moral Principles: ¹

Nonmaleficence	<i>The intent to do no harm</i>
Beneficence	<i>The aim to do good</i>
Justice	<i>Fair distribution of scarce resources</i>
Autonomy	<i>The ability to self-rule without controlling influences</i>



Non-Maleficence

To prevent foreseeable harm, providers must be aware of the potential adverse effects of their procedures. Given the paucity of relevant randomized controlled trials and observational studies, case reports are the predominate type of literature for cSMT complications. There are reports documenting a wide range of neurovascular injuries, including: stroke, brachial plexus palsy, cervical disc prolapse, retinal artery occlusion, diaphragm paralysis, locked-in syndrome, hematomas, diaphragmatic paralysis, and death². These findings suggest that a risk of neurovascular disability does exist and that its incidence is not unremarkable.



Beneficence

Based solely on beneficence, cSMT may hold some clinical permissibility. Of the papers published defending the use of cSMT for the treatment of neck pain, the majority show superior relief in immediate post-procedure period. However, most showed equivalent improvement in pain in the weeks to months following. Furthermore, there are direct comparison studies that found no statistically significant difference between cSMT and HEA at any point in time, which suggests that both methods are relatively equivalent³. Therefore, it is reasonable to conclude that neither option is notably superior to the other in terms of pain relief.



Justice

The utilitarian theory of distributive justice focuses on the outcomes of procedures and leans on the ideas of cost-effectiveness and efficiency. Based on expenditure reports, the USA spent roughly \$564 million on chiropractic care in 2018 alone, in addition to nearly \$2.9 billion in total between 2010 and 2015 for chiropractic services among Medicare B beneficiaries aged 66-99 years⁴. It is estimated that nearly half of this went to therapies that were not billed properly or medically unnecessary. From a utilitarianism perspective, government assistance should instead be allocated in a manner that maximizes public utility.



Autonomy

A patient has the right to make autonomous decisions based on their own opinions and beliefs. With conflicting research regarding the efficacy of cSMT, referring physicians may be hesitant to recommend the procedure, while trained professionals may hesitate to disclose all risks. We believe that it is ethical to recommend the procedure. However, in order for the patient to provide informed consent, the provider has a moral obligation to disclose all of the risks.

Conclusion

Although it is impossible to scientifically prove the causal relationship between cSMT and CAD in an RCT, the potential for cSMT to cause severe neurovascular complications and permanent disability has been well documented and is without doubt. Conservative medical therapies pose greater danger, while providing similar symptom relief. To conclude, we do not believe cSMT is morally permissible.

References

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