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From acupuncture to radiofrequency ablation: evidence and recommendations of treatments for cervicogenic headache

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Introduction

Cervicogenic headache (CGH) is a secondary headache arising from cervical spine disorders that must be distinguished from tension type headache. CGH may be managed through various therapeutic interventions aimed at alleviating pain and improving function.

Objective

This summary aims to evaluate the available treatments for cervicogenic headache, their indications and the level of evidence supporting them.

Methodology

A comprehensive literature review was conducted, focusing on studies that investigated the treatment of CGH. The search across MEDLINE, WPRIM, and PubMed databases used "cervicogenic," "headache," and "treatment" as search terms, yielding 64 results. After screening for relevance, 37 articles were included.

Results

Multiple treatment options are available for CGH, including cervical epidural steroid injection (CESI), acupuncture, manipulation and mobilization (manual therapy), radiofrequency ablation, deep cervical plexus block, and botulinum toxin injections. High-level evidence supports CESI, acupuncture and manual therapy. CESI is recommended for moderate to severe CGH, refractory to conservative treatments, showing improvements in pain scores. Acupuncture is suitable for patients seeking non-pharmacological treatment, reducing pain and improving functionality. Manual therapy is considered first-line treatment, with randomized controlled trials showing that combining cervical manipulation and exercises is more effective than mobilization alone.

Radiofrequency ablation and deep cervical plexus block are indicated for CGH that does not respond to other interventions, showing high efficacy and prolonged pain relief, with moderate evidence . Deep cervical plexus block is applied for short-term pain management in refractory cases, with short-term effectiveness, though its long-term benefits are limited. Botulinum toxin injections, considered when other treatments fail, have low to mixed levels of evidence (3 and 4) as they are not consistently superior to placebo in controlled trials.

Conclusion

Options ranging from conservative therapies like manual therapy and acupuncture to interventional approaches are available. The choice of treatment depends on the severity of symptoms, patient preference, and response to initial therapies. High-quality evidence supports the use of CESI, acupuncture, and radiofrequency ablation for significant and sustained pain relief, while treatments like botulinum toxin injections require further research to establish consistent efficacy. Future studies with long-term follow-up and comparative effectiveness of these interventions are needed.