Methods Physical examination shows atrophy of the left trapezius and sternocleidomastoid muscles, along with reduced strength in the upper and middle trapezius (figure 1). Post-vaccination Parsonage-Turner syndrome or accessory spinal nerve injury is considered. Electromyography reveals moderate to severe partial axonotmesis of the left accessory spinal nerve (figure 2). Magnetic resonance imaging shows extensive neuropathy along the nerve pathway (figure 3). The patient receives conservative treatment with analgesics, corticosteroids, pregabalin, clonazepam, and intensive rehabilitation. Significant improvement in pain and muscular recovery is observed at 6 weeks. Electromyography at 8 weeks demonstrates increased amplitude of the motor evoked potential, indicating progressive and adequate reinnervation. In conclusion, accessory spinal nerve injuries are uncommon after mild trauma and are typically associated with oncological surgery. Initial treatment should be conservative, considering surgical options only if conservative treatment fails. Additionally, the use of platelet-rich plasma may hold promise in the treatment of such injuries. Comprehensive physical examination and appropriate ancillary tests are essential for accurate diagnosis and proper management, as pathological imaging does not always explain clinical findings.

Attachment EMG 1.png

#36482 REVOLUTIONIZING NERVE PAIN TREATMENT: HARNESING DOSIMETRY, NANOBOTS, AND AI FOR PERSONALIZED RELIEF

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Please confirm that an ethics committee approval has been applied for or granted: Not relevant (see information at the bottom of this page)

Background and Aims Developing a multidisciplinary approach for nerve pain treatment involves dosimetry, nanobots, and artificial intelligence (AI). Dosimetry calculates radiation dosage to determine the optimal treatment dose based on patient factors. Nanobots target nerve cells or pain receptors, improving precision. AI analyzes patient-specific data to optimize treatment plans. The aim is to revolutionize nerve pain treatment by leveraging dosimetry, nanobots, and AI. Dosimetry ensures personalized treatment, nanobots target specific cells, and AI optimizes plans.

Methods Methods include patient evaluation, dosimetry planning, nanobot design, treatment administration, AI analysis, and treatment refinement. Patient evaluation considers medical history, imaging, and pain intensity. Dosimetry determines optimal dosage. Nanobots are designed to target cells, administered with imaging guidance. AI analyzes dosimetry, imaging, and nanobot data to optimize treatment. Treatment plans are refined based on AI analysis.

Results Results show promising integration of dosimetry, nanobots, and AI. Dosimetry allows personalized treatment, nanobots enhance precision, and AI optimizes strategies.

Conclusions In conclusion, the multidisciplinary approach of harnessing dosimetry, nanobots, and AI revolutionizes nerve pain treatment. By providing personalized relief through optimized treatment plans, this approach has the potential to significantly improve the quality of life for individuals suffering from nerve pain.
Background and Aims Chronic pain presents a significant healthcare burden and can become quite debilitating. The current standards of care for chronic pain include lifestyle management, procedures, and analgesics for acute exacerbations. However, using analgesic approaches has led to significant adverse effects and healthcare burdens. This review aims to investigate the current literature regarding emerging pharmacological approaches to chronic pain.

Methods This investigation eliminated non-pharmacologic therapies and established chronic pain regimens, focusing on three primary drug classes: cannabis, psychedelics, and dissociative hypnotics. Emphasis was placed on ketamine (hypnotic) and psilocybin (psychedelic), with other drugs also considered. Cannabis was treated as a unique drug class due to its distinct mechanism of action and abundant literature.

Results The review revealed promise in all three drug classes, with marijuana being the most researched yet needing further study on adverse effects. Ketamine showed potential but had abuse concerns; other hypnotics require more evidence of efficacy. Finally, psychedelics, the least understood treatment for chronic pain, demonstrated promise in small studies but need further research on dose-dependent adverse effects, mainly acute psychosis.

Conclusions Despite limited literature and class-specific concerns, emerging pharmacological pain management approaches can improve patients’ quality of life. Issues include abuse potential, acute adverse effects, and legality. Significant progress is needed before these drug classes become standard in chronic pain treatment, but they can potentially reduce the overuse of highly addictive analgesics.