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 reinervation. 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: HARNESSING DOSIMETRY, NANOBOTS, AND AI FOR PERSONALIZED RELIEF

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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.

#35752 ULTRASOUND VS FLUOROSCOPY IN THE MANAGEMENT OF CERVICAL RADICULAR PAIN: CAN WE REPLACE FLUOROSCOPY?

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Background and Aims Transforaminal Epidural steroid injection is an extremely valuable tool in the conservative management of cervical radicular pain. For decades this injection has been performed under fluoroscopic guidance and while complications are serious and infrequent, this imaging technique cannot prevent inadvertent arterial puncture. Considering delicate cervical anatomy, ultrasound may bring a valid alternative, allowing for real time needle advancement, at no radiation expenses. Recent medical studies have supported the use of Ultrasound as a pivotal imaging tool and as an alternative to the gold standard of this procedure. The aim of this presentation is to illustrate the Cervical TESI, comparing the ultrasound to the already consolidated imaging tool.
Methods This review describes advantages and disadvantages of US guided cervical epidural steroid injection techniques compared to the fluoroscopic guidance, as encountered in the recent medical literature.
Results Despite the lack of foraminal flow visualization, recent medical studies have demonstrated correct target identification with immediate and long- term effectiveness of extraforaminal (periradicular) US guided steroid injections. A higher volume showed an increase in the foraminal flow, without modifying the outcome. Also, recently, a new technique of US guided transforaminal epidural injection has been described and investigated.
Conclusions Ultrasound guided injections have several meaningful advantages over any other imaging technique, providing real time visualization and possibly preventing inadvertent vascular canulation. However, the US guided technique cannot demonstrate utility regarding the posterior foraminal vasculature, thus still relying on aspiration and fluoroscopic confirmation. Until further research, a combination of both US and Fluoroscopic guided techniques remains the recommended approach.

#35647 ALTERNATIVE PHARMACOLOGICAL APPROACHES TO CHRONIC PAIN MANAGEMENT

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