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Ultrasound Guided Identification in Preservation of the Spinal Accessory Nerve During Excision of Lipomas in the Posterior Triangle of the Neck. A Small Case Series

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Introduction

Surgical excision of tumors in the posterior cervical triangle (PCT) carries a high risk of iatrogenic spinal accessory nerve (SAN) injury, leading to significant morbidity. Large lipomas in this area are particularly challenging due to their size and proximity to the SAN, which may vary anatomically. High-resolution ultrasonography (US), especially when performed by the operating surgeon, may improve preoperative planning and nerve preservation. This case series examines the role of surgeon-performed US in identifying the SAN prior to excision of large (>5 cm) lipomas in the PCT.

Methods

Between August 2023 and January 2025, four patients with symptomatic lipomas >5 cm in the parotid or cervical region underwent surgery at a secondary care center in Sweden. A single head and neck surgeon trained in ultrasonography preoperatively marked the course of the nerve before incision on the day of surgery. Nerve integrity monitoring (NIM) was used for additional verification intraoperatively. Clinical, imaging, and surgical data were obtained.

Outcomes

US identified the SAN in all cases, with distances between the nerve and lipoma ranging from <1 mm to 14 mm. Skin markings guided incision planning. Intraoperative SAN identification was confirmed by visualization and nerve stimulation. All tumors were excised without motor nerve injury. One patient developed a transient seroma that resolved spontaneously. Histopathology confirmed benign lipomatous tumors.

Conclusion

Surgeon-performed preoperative US is a valuable tool for mapping the SAN and reducing nerve injury risk during excision of large PCT lipomas. This practical technique may enhance safety even in non-tertiary settings.