



Innovations

Stabilizing the slippery lipoma: Needle marking as a surgical aid

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ABSTRACT

Deep-seated lipomas are difficult to excise due to slippage beneath the subcutaneous plane, resulting in longer operative time and wider dissection. Here, we describe a simple needle marking technique for the localization of lipoma in which the indwelling needle stabilizes the lipoma and serves as a landmark for accurate incision placement and guides dissection. This method is particularly useful for lesions on the back, thighs, or in obese patients where localization is difficult. This technique is quick, inexpensive, requires no additional equipment, and improves surgical precision while minimizing unnecessary tissue handling.

Keywords: Deep-seated lipoma, Needle marking technique, Surgical localization

PROBLEM STATEMENT

Deep-seated lipomas can be very challenging for surgical excision when the lesion is large and difficult to palpate due to slippage below the subcutaneous plane. There is difficulty in localizing the exact site, which can result in longer dissection time, larger tissue dissection, and an increase chance of incomplete excision.

RECOMMENDED SOLUTION

Marking the lesion with a sterile needle before local anesthetic infiltration can be an easy and efficient method to address this surgical challenge. After sterilizing the lesion with povidone iodine solution, a sterile 21-gauge needle is inserted perpendicularly into the center of the palpable lipoma to stabilize the lesion and create a fixed landmark. The needle is advanced until subtle resistance is felt, corresponding to the subcutaneous plane of the lesion (approximately 1–1.5 cm in depth). This is followed by infiltration of local anesthesia around the lesion while the needle remains in place [Figure 1a]. The incision is planned adjacent to the needle entry point, guided by its position to ensure access through the most prominent part of the lesion [Figure 1b]. The needle is removed after adequate localization of the deep-seated lipoma, allowing proper undermining, blunt dissection, and subsequent excision of the lesion [Figure 2]. This technique facilitates accurate intraoperative localization and minimizes unnecessary dissection. In the present case, a single needle was sufficient; however, in larger or multilobulated lipomas, additional needles may be inserted to improve orientation and delineate lesion margins if needed.

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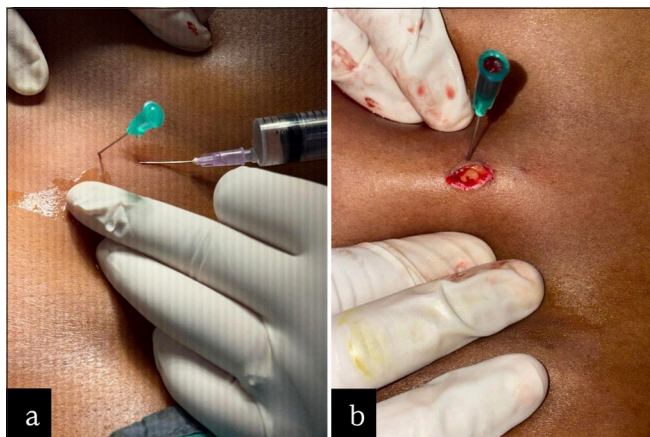


Figure 1: (a) A 21-gauge needle inserted perpendicularly into the lipoma before infiltration of local anesthesia, which will serve as a fixed landmark. (b) An intraoperative image showing how the indwelling needle guides further incision and dissection, enabling accurate localization of the deeply seated lipoma.



Figure 2: Excised specimen of a large deep-seated lipoma with two 10-mL syringes placed alongside for size reference.

Discussion

The described needle localization technique represents a simple and minimally invasive modification to facilitate accurate localization of deep-seated or mobile lipomas. This method can be employed for lesions in the back or thighs or in obese individuals, where lesions are deep and are prone to slippage. This technique increases surgical precision while reducing unnecessary dissection, takes minimal additional time, and does not require any extra equipment. The technique is safe, minimally invasive, and intended solely for benign lipomas. It should not be applied to lesions of uncertain diagnosis where malignancy cannot be excluded. In this case, no adverse effects such as bleeding or infection were seen.

A somewhat similar technique was described by Yoo and Mun (2004), who used a 19-gauge spinal needle to transfix and fixate subcutaneous lipomas during excision to prevent slippage.¹ In contrast, the present approach is designed primarily for localization rather than fixation.¹ This approach relies only on a temporary, single-needle marking without fixation or additional anchoring, thereby minimizing tissue trauma, pain, and procedural time. The main advantage of this technique is its ease, reproducibility, and minimal invasiveness, requiring no specialized instruments or additional steps. The limitation, however, is that it may be less effective for very large or multilobulated lipomas, where multiple localization points may be required.

Conclusion

This needle marking method is a practical, repeatable, and cost-effective approach to remove deep, difficult-to-palpate lipomas, especially in settings with limited resources.

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Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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REFERENCE

1. Yoo WM, Mun HY. Minimally invasive localization technique: needle fixation of subcutaneous lipoma. *Plast Reconstr Surg* 2004;113:785-6.

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