

**International Journal of Biology, Pharmacy
and Allied Sciences (IJBPAS)**
'A Bridge Between Laboratory and Reader'

www.ijbpas.com

EXCISION OF AXILLARY HIDRADENITIS SUPPURATIVA WITH ULTRASOUND GUIDED COMBINED UPPER TRUNK AND INTERCOSTOBRACHIAL NERVE BLOCKS

SRUTHI R¹ AND PARTHASARATHY S^{2*}

1: Junior Resident, Department of Anaesthesiology, Mahatma Gandhi Medical college and research Institute, Sri Balaji Vidyapeeth, Pondicherry, India; **Orcid id: 0009-0001-0826-6458**

2: Professor, Department of Anaesthesiology, Mahatma Gandhi Medical college and research Institute, Sri Balaji Vidyapeeth (deemed to be university), Pondicherry, India;

Orcid id: <https://orcid.org/0000-0002-3808-6722>

***Corresponding Author: Dr. S Parthasarathy: E Mail: painfreepartha@gmail.com**

Received 6th July 2025; Revised 16th Aug. 2025; Accepted 31st Oct. 2025; Available online 1st Aug. 2026

<https://doi.org/10.31032/IJBPAS/2026/15.8.10257>

ABSTRACT

A 25-year-old woman with hidradenitis suppurativa was admitted with recurrent boils in the right axilla for six months, resistant to conservative management. Excision and primary closure were planned, and regional anesthesia was achieved with a combined upper trunk and intercostobrachial nerve (ICBN) block. After sedation using midazolam and fentanyl, ultrasound-guided injection of the anesthetic comprised 6-7 ml of 0.5% bupivacaine to the upper trunk and another 6 ml to the ICBN. A patchy anaesthesia in the upper lateral region was managed with an extra 2 ml of local infiltration of 2% lignocaine. The surgery was carried out pain-free for half an hour. The clinical significance of blocking ICBN in anaesthesia for axillary surgery is highlighted. Axillary area is supplied by multiple nerves with a lot of individual variations. This case highlights the success of focal regional anaesthesia in superficial axillary operations, focusing on the advantage of ultrasound guidance for accurate nerve localisation and effective pain relief, avoiding systemic side effects.

Keywords: Axilla, Hidradenitis, anaesthesia, block, intercostobrachial nerve

INTRODUCTION:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disorder with painful, recurrent lumps that look like boils. HS occurs primarily in the axilla, groin, and perianal region. This disabling disorder can progress to abscess formation, scarring, and damage; thus, it is important to develop a earlier successful management strategy. While conservative treatments with antibiotics and anti-inflammatory drugs can reduce symptoms, excision will be required when lesions recur and become unmanageable with standard medical therapy [1]. Regional anesthesia is a useful approach in this situation; especially for superficial surgery with avoidance of General anaesthesia with associated increased morbidities and cost. Also,

ultrasound guidance improves the accuracy of nerve localization and the delivery of anesthetic, providing favorable outcomes. This case report describes a successful combined upper trunk and intercostobrachial nerve block for excising hidradenitis suppurativa lesions located in the axilla for a 25-year-old female patient.

Case capsule:

A 25-year-old, 65 kg female presented with boils and pus drainage in the right axilla of 6 months duration. She was treated with parenteral and local antibiotics with anti-inflammatory drugs for more than 3 months. The response was unsatisfactory, and the symptoms persisted. She was posted for excision and primary closure (Figure 1).



Figure 1: Showing pus discharge in right axilla

Her routine investigations were normal. The plan was to administer a combined upper trunk and intercostobrachial nerve (ICBN) block. She was administered 2 mg midazolam and 50 mcg of fentanyl. With ultrasound guidance, the upper trunk was traced, and 6-7 ml of 0.5% bupivacaine was administered. With the HFL probe, in the

lateral portion of the front of the anterior axillary line, the second and third ribs were identified, the intercostobrachial nerve was identified in the plane between the pectoralis minor and intercostal muscles, and another 6 ml of the same drug was given (**Figure 2**).

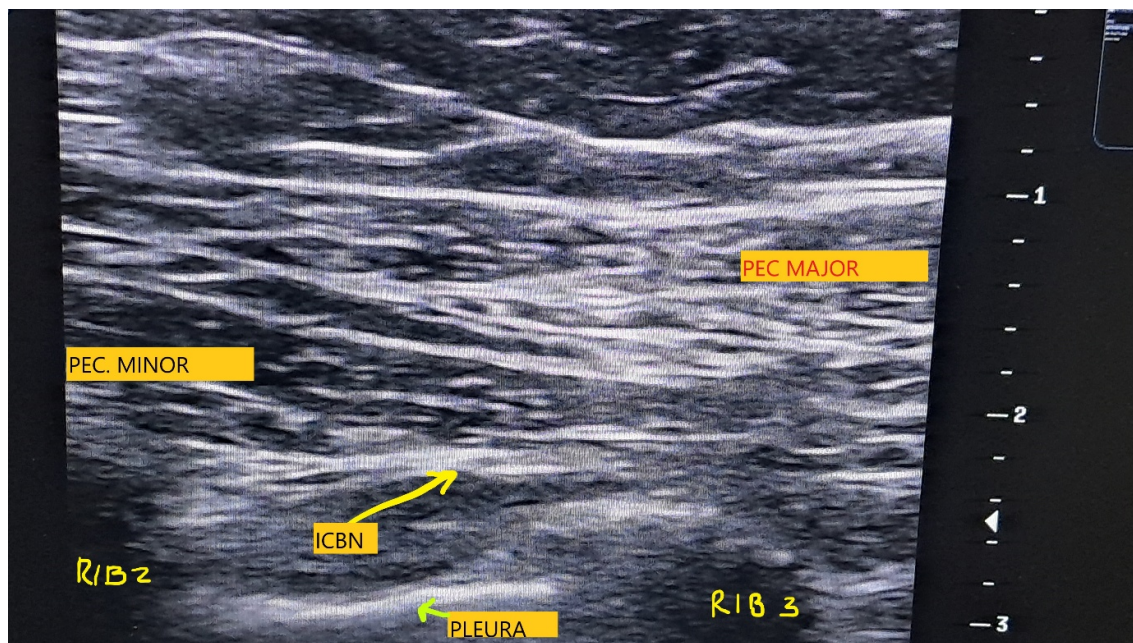


Figure 2: Showing intercostobrachial nerve (ICBN) between pectoralis minor and intercostal muscles

The anesthesia was established in 5–10 minutes. In the upper lateral portion, the anesthesia was patchy. Two ml of 2% lignocaine was administered subcutaneously. The surgery was completed in half an hour without any pain. The patient was discharged the same day without any side effects.

DISCUSSION:

Hidradenitis suppurativa is a chronic skin condition where painful, boil-like lumps appear under the skin. Also referred to as

acne inversa or Verneuil's disease, it is characterized by inflamed, swollen lumps, which often rupture and release pus or fluid. The bumps can cause abscesses with scarring upon healing. Excision with skin grafting is preferred [2]. In our case, as the abscess was not very big, the surgeon decided not to proceed with skin grafting. Hence the block was contemplated. The axilla is predominantly supplied by the ICBN and the axillary nerves. The axillary nerve emerges from the posterior cord with

C5 and C6 as root values. Hence the upper trunk block is certain to block the axillary nerve. The upper portion of the incision may be innervated by a few fibers from the supraclavicular nerves. ICBN is primarily responsible for the majority of the cutaneous supply and sensory innervation of the axilla. As a supplement to the axilla's sensory supply, the brachial plexus innervates structures inside the axilla, which may need to be blocked during extensive axillary surgeries. The volume given in the trunk in our case is likely to diffuse and even block the thoracodorsal nerves. Sidel *et al.* [3] demonstrated that surgery of the axilla is possible with combined brachial plexus and ICBN blocks in cadaveric studies. Munasinghe *et al.* [4] have demonstrated the effectiveness of ICBN blocks with the brachial plexus for axillary clearance in post-mastectomy patients. Guimer [5] has reported axillary debridement with combined serratus anterior fascial plane block with brachial plexus block. We decided to target nerves rather than planes. Ours is a more superficial surgery, so there was no need for anesthesia to deeper structures. To conclude, in this case of hidradenitis suppurativa, the combined upper trunk and intercostobrachial nerve blocks successfully anesthetized the region for the excision procedure and therefore highlight the role of regional anesthesia in superficial

surgeries. An intercostobrachial nerve (ICBN) block can be difficult due to variations in anatomy, and it is outside of the brachial plexus [6]. Standard techniques for brachial plexus blocks, such as supraclavicular or infraclavicular blocks will often not inhibit ICBN, which only innervates certain sections of the axilla and the upper arm. Use of ultrasound guidance allowed very accurate localization and administration of anesthetic, thus giving the patient optimal pain control without major systemic side effects.

CONCLUSION:

In this case, we utilized a combined upper trunk and intercostobrachial nerve block that achieved suitable analgesia for excising hidradenitis suppurativa lesions in the axilla of a 25-year-old female patient. The clinical significance of blocking ICBN in anaesthesia for axillary surgery is highlighted. By utilizing a localized approach, we were able to perform the scheduled surgical procedure without pain while helping to reduce the chance of any systemic side effects associated with general anesthesia.

Patient consent – Yes

There is no external financial aid.

REFERENCES:

- [1] González-López MA. Hidradenitis suppurativa. *Med Clin (Barc)*. 2024 Feb 23;162(4):182-189.

- [2] Nowak-Liduk A, Kitala D, Ochała-Gierek G, Łabuś W, Bergler-Czop B, Pietraszka K, Niemiec P, Szyluk K, Gierek M. Hidradenitis Suppurativa: An Interdisciplinary Problem in Dermatology, Gynecology, and Surgery-Pathogenesis, Comorbidities, and Current Treatments. *Life* (Basel). 2023 Sep 11;13(9):1895. doi: 10.3390/life13091895.
- [3] Seidel, R A.T. Gray · A Wree · M Schulze Surgery of the axilla with combined brachial plexus and intercostobrachial nerve block in the subpectoral intercostal plane. *British Journal of Anaesthesia*, 2017: 118, (3), 472 – 474.
- [4] Munasinghe, B.M, Subramaniam., Nimalan, S., Sivamayuran, P., Ultra sound to the Rescue: Axillary Clearance under Complete Regional Blockade, *Case Reports in Anesthesiology*, 2021, 6655930, <https://doi.org/10.1155/2021/6655930>.
- [5] Leonardo Saraiva Guimarães de Oliveira, Renata de Andrade Chaves, Debridement of axillary necrotizing fasciitis under anesthetic blocks of the serratus plane and supraclavicular brachial plexus: a case report, *Brazilian Journal of Anesthesiology* 2023: 73, (1); 104-107.
- [6] Loukas, M., Hullett, J., Louis, R.G., Jr, Holdman, S. and Holdman, D. (2006), The gross anatomy of the extrathoracic course of the intercostobrachial nerve. *Clin. Anat.*, 19: 106-111. <https://doi.org/10.1002/ca.20226>