



ULTRASOUND - A BLESSING FOR REGIONAL ANAESTHESIA

**Dr. Nishchint
Sharma***

MD Anaesthesia. Civil Hospital Nadaun, Hamirpur, Himachal Pradesh.
*Corresponding Author

**Dr. Bharti
Choudhary**

MD Anaesthesia, Civil Hospital Nadaun, Hamirpur, Himachal Pradesh.

ABSTRACT Use of USG in regional nerve blocks is increasing day by day. With the help of USG clinician can view real time image of patient's anatomy, which offers a new standard in nerve location and needle placement. It allows direct visualization of local anesthetic spread around the nerve. USG guided nerve blocks allow reliable and safe anaesthesia and analgesia. USG is a blessing in a way that, it offers high success rate with low complications, in regional nerve blocks.

KEYWORDS : USG, Regional Anaesthesia

INTRODUCTION :

The use of ultrasound for regional anaesthesia is relatively new; however, interest in this application has growing exponentially. Ultrasound-guided nerve blocks were first described as early as 1978, but it was not until the advent of advanced ultrasound technology in the 1990's that interest in this field was recognized. Conventional peripheral nerve block techniques that are performed without visual guidance are highly dependent on surface anatomical landmarks for localization of the target nerve. It is therefore not surprising that regional anaesthetic techniques are associated with a reported failure rate of up to 20% presumably because of incorrect needle and/or local anaesthetic spread. Multiple trial-and-error attempts to locate the target nerve can lead to operator frustration, unwarranted patient discomfort and time delay in the operating room, especially in patients with difficult anatomical landmarks.¹

Ultrasound And Regional Anaesthesia:

- Identify the target nerve and its surrounding structures like arteries, veins etc. by direct visualization.
- Real time visualization and guidance of the needle to the target by determining depth and path of the needle.
- We can see direct drug spread around target nerve.
- We can perform procedure on anaesthetised patients.
- There is decreased requirement of drug, hence less chances of drug toxicity.
- Rapid block onset.
- Less procedural time and pain.
- Decreased rate of complications (pleural puncture, arterial puncture).
- Improved patients satisfaction.
- Useful tool in deep blocks like celiac plexus block and other invasive pain therapy.
- Easy portability and safety (no radiation hazard).

Ultrasound guided regional blocks are good alternative to general anaesthesia for some surgeries. Most of the upper limb surgeries are being done under brachial plexus block. Ultrasound guided regional blocks have better safety profile and many advantages over conventional techniques.² Many studies are being done on ultrasound and regional anaesthesia. Many anatomical variations and their incidences are identified, minimum effective doses of local anaesthetic are determined under ultrasound guidance. In future, we can get studies based on real time 3D ultrasound imaging and robotically assisted ultrasound guided needle placement.³

REFERENCES

1. Chan VW, Perlas A, Rawson R, Odukoya O. Ultrasound-guided supraclavicular brachial plexus block. *Anaesth Analg*. 2003;97:1514-7.
2. Raju, P. K. B. C., & Coventry, D. M. (2014). Ultrasound-guided brachial plexus blocks. *Continuing Education in Anaesthesia, Critical Care and Pain*, 14(4), 185-191.
3. Kettenbach J, Kronreif G, Figl M, et al. Robot-assisted biopsy using ultrasound guidance: initial results from in vitro tests. *Eur Radiol* 2005; 15:765-71.