VETERINARY ANATOMY
UNIT - 2
SITE FOR
RADIAL, MEDIAN, ULNAR AND VOLAR NERVE BLOCKS

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Radial nerve block

- **Indications:** fracture repair, dislocation and surgery below elbow joints.

- **Anatomy:** the radial nerve supplies to the dorsal aspect of the forelimb and manus except in horses where it stops at the carpus.

- **Technique:** the nerve is blocked at a point where it spirals around the humerus from medial to the lateral aspect.
The site of injection is midway between the olecranon process and the acromion process that is upper third of the humerus on the posterior aspect. Inject 2 to 4ml of local anesthetic using 20 G 3-5cm long needle. The effect is seen within 10 mins. And lasts for 2hrs
Median Nerve Block

- The median nerve passes below the elbow beneath the pronator teres
- It then runs down along the forearm between the radius and flexor carpi radialis muscle
- Median nerve supplies pronator teres, flexor carpi radialis, superficial digital flexor, humeral and radial heads of deep digital flexor muscles
- Site: Below the medial tuberosity of the radius at the groove between caudal border of the radius and flexor carpi radialis muscle
Technique

- The site of the injection is the medial aspect of the elbow joint just anterior to the medial epicondyle of the humerus.
- The nerve is covered by skin and fascia only.
- Inject 5-10 ml of the local anaesthetic to cause the median nerve block.
Ulnar nerve block

- At the lower one third of the forearm this nerve lies relatively superficial between the flexor carpi ulnaris and ulnaris lateralis muscle.
- Ulnar nerve supplies the flexor carpi ulnaris, superficial digital flexor and ulnar \textbf{head} of deep digital flexor.
- Site: A few inches above accessory carpal.
The site of the injection is about 7-10cm above the accessory carpel bone on the volar (posterior) aspect of the limbs in the groove between the flexor carpi ulnaris and laterlis muscle.

The needle is inserted about 0.5-1.5 cm deep and 10 ml of the local anesthetic is administered to achieve the block.
VOLAR NERVE BLOCK

- The volar or metacarpal nerves are terminal branches of the median nerve
- The lateral volar nerve merges with the deep branch of the ulnar nerve
- The medial volar nerve is accompanied by the medial volar metacarpal artery, the lateral volar nerve is accompanied by the lateral volar metacarpal artery
Each volar metacarpal nerve continues as respective volar abaxial digital nerve where as volar common digital nerve is formed by union of middle branches of median nerve

**Site**

- *High volar block:* 5 to 7 cm above the fetlock in the depression between suspensory ligament and deep flexor tendon both on medial and lateral aspects
- *Low volar block:* Midway between the fetlock and coronet in between deep digital flexor and superficial digital flexor both on medial and lateral aspects
FIG. 6-6. Needle placement for median nerve block: medial and cross-sectional views. Stippled markings indicate desensitized area after median nerve block of the left forelimb. D, Dorsal view; L, lateral view; M, medial view; P, palmar view.
Thanks