

# Local anaesthesia

- LA is used to prevent the perception of pain by blocking its different pathways at various sites as –
  - peripheral nerve fibres
  - nerves
  - plexus
  - ant and post nerve root at spinal level

## **ADVANTAGES-**

- Patient remains conscious and still doesn't feel pain.
- No pre anesthetic preparation.
- Complication and untoward effects of GA is avoided.
- No hospitalization.
- Psychological trauma to relatives is avoided.

## **DISADVANTAGES –**

- Not good for uncooperative patients.
- Ideal surgical condition ( bloodless and relaxed field) is not produced.
- If the block is partial, patient may develop vasovagal shock or hypersympathetic activity.
- Hypersensitivity or anaphylactic reaction.
- It cannot be used in infected areas.

## DRUGS AND PREPARATION –

*Xylocaine* –

1. Plain 1%, 2%
2. With adrenaline 1%, 2%

Uses –

- For local infiltration, nerve block and epidural anaesthesia.
- 4% for topical use (ear,nose,eye)
- 5% heavy for spinal anaesthesia
- 2% jelly for topical use
- 5% oint. For topical use

## *BUPIVACAINE* –

- 0.5% for local infiltration, nerve block and epidural anaesthesia
- 1% for SA

## LOCAL ANAESTHESIA

### Xylocaine 2% jelly

- Used as lubricant having local pain relieving effect.
- Urological use as high surface anaesthetic effect, transparent, low toxicity, highly viscous.
- It anaesthetizes whole urethral mucosa and acts as lubricant.

### *XYLOCAINE 5% ointment –*

- It is preferred over jelly where anaesthesia is the primary need than lubricant.
- It contains 5% xylocaine with carbowax.
- Xylocaine base penetrates the tissues and exerts powerful action.
- Used in anal conditions eg. Fissures, mild burns, cracked nipples etc.

## **Methods of local anaesthesia –**

*1.Surface analgesia*

*2.Infiltration analgesia*

*3.Nerve block*

*4.Field block*

## **Infiltration analgesia –**

### **Method –**

- Explain the patient
- Painting and draping
- Inject the solution and a small wheal
- Push the needle through the wheal and along the line of incision.
- Keep it close to skin surface than to subcutaneous tissues.
- Always keep the needle moving.
- Aspirate before injecting to confirm that the needle is not in a vessel.



## INDICATIONS –

- FOR SUTURING WOUNDS
- REMOVAL OF SMALL CYSTS AND LIPOMAS
- MINOR SURGICAL PROCEDURES

## **DOSE –**

Maximum dose with adrenaline

- Xylocaine 2% - 20 ml = 400 mg

3 -5 mg /kg wt

Maximum dose without adrenaline

- Xylocaine 2% - 10 ml =200 mg

5 -7 mg/kg wt

## SIDE EFFECTS –

Toxic – convulsions, hypotension

Non toxic – giddiness, tingling and numbness,  
Initial local pain

## **Reactions –**

- Dose related
- Intravenous injection
- Anaphylactic reaction

## **1.True reactions-**

- Clinical features

local redness, itching , swelling

Treatment – inj. Avil, inj. Hydrocortisone

## **2.Dose related-**

- Stimulaation of CVS and Central Nervous System followed by depression.
- Cloudiness of consciousness
- Tremors
- Invvoluntary movements
- Convulsions

Treatment –

- inj. ANXOL 10mg diluted to sedate the patient.
- 100% oxygenation by mask

### 3. ACCIDENTAL INJ TO BLOOD VESSELS-

Clinical features-

- hypotension, cardiac arrest,
- CNS depression , coma

### 4. Anaphylactic reaction

- hypotension, bronchospasm,
- pulmonary oedema

Treatment-

- inj. Adrenaline .2 cc, sc
- Inj. Avil
- Inj. Cort-s