

# **CLINICAL MEET**

**INTERVENTIONAL TECHNIQUES**

**IN**

**PAIN MANAGEMENT**

**DEPT OF ANAESTHESIA**

**Dr.D.Y.PATIL MEDICAL COLLEGE AND RESEARCH  
CENTRE,PIMPRI,PUNE**

# PAIN CONDITIONS TREATED

DPU

Dr. D. Y. Patil Hospital & Research Centre

Sant Tukaram Nagar, Pimpri, Pune - 18

Department of Anesthesia

Pain Clinic

We Treat Pain Without Surgery !

बिना ऑपरेशन वेदनेपासून मुक्तता !

**वेदना...** एक अनुभव नको नकोसा !

**वेदनामुक्ती...** एक अनुभव हवा हवासा !!

Low Back Pain

Sciatica, Neck Pain

Headache

Shoulder Pain

Knee Pain

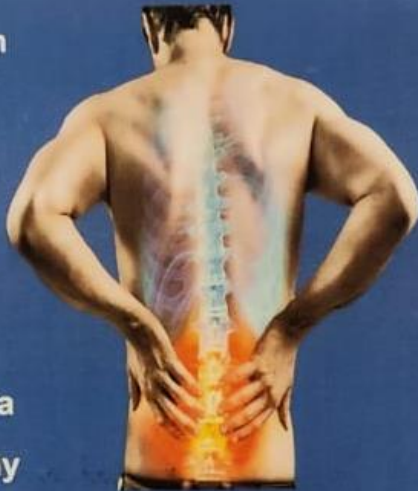
Facial Pain

Cancer Pain

Herpetic Neuralgia

Diabetic Neuropathy

Trigeminal Neuralgia



पाठदुखी, सायटीका

मानदुखी, डोकेदुखी

चेहऱ्याच्या वेदना

ट्रायजिमिनल न्युराल्जिया

कॅन्सरच्या वेदना

मधुमेही रुग्णांच्या वेदना

नागीण

स्नायूंची वेदना

संपूर्ण शरीरातील वेदना

DPU

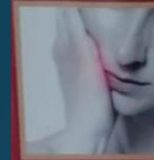
डॉ. डी. वाय. पाटील वैद्यकीय महाविद्यालय  
रुग्णालय व संशोधन केंद्र, पिंपरी, पुणे

वेदना निवारण केंद्र

ह्या वेदना सहन करू नका



डोकेदुखी, मायग्रेन,  
स्नायूंचे होणारी डोकेदुखी,  
ट्रायजिमिनल न्युराल्जिया,



मानदुखी,

स्पॉन्डिलोसिस,

खांदे दुखी,

पोट दुखी, पॅन्क्रियाटायटीस



हातापायातील वेदना,



जुने फ्रॅक्चर,

जखम झालेल्या



ठिकाणी होणाऱ्या वेदना,



पाठ व कंबर दुखी,

स्लिप डिस्क,

सायटिका,



गुडघे दुखी, संधिवात,



नागीण, डायबेटिक न्यूरॉपॅथी

कॅन्सरमुळे होणाऱ्या वेदना



फायब्रोमायाल्जिया,

गॅंग्रीन, फॅन्टम पेन, टाच दुखी



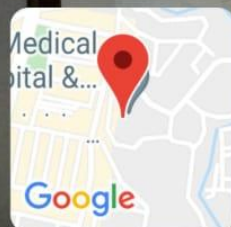
अधिक काळ राहिलेल्या

कोणत्याही वेदना



पेन क्लिनिक, (वेदना निवारण केंद्र)

अॅनेस्थेसिया विभाग, जूनी इमारत, डॉ. डी. वाय. पाटील वैद्यकीय महाविद्यालय,



### Pimpri-Chinchwad, Maharashtra, India

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411018, India

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Long E 73° 49' 16.032"

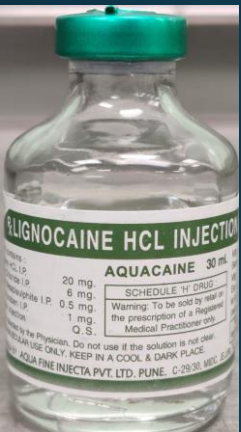
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# INTERVENTIONAL PAIN MANAGEMENT PROCEDURES PERFORMED

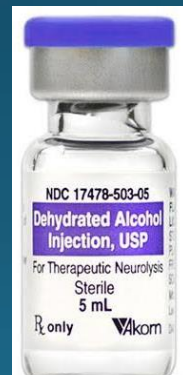
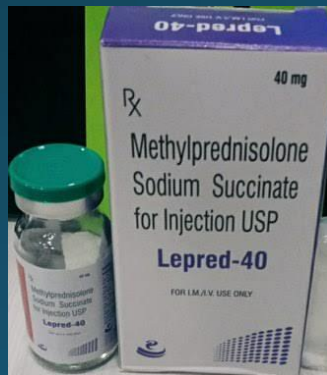
- Trigger point blocks
- ROOT blocks
- Plexus block-brachial plexus,lumbar plexus
- Peripheral nerve blocks
- Sympathetic blocks
- Joint block:facet joint,sacroiliac joint,knee ,hip joint



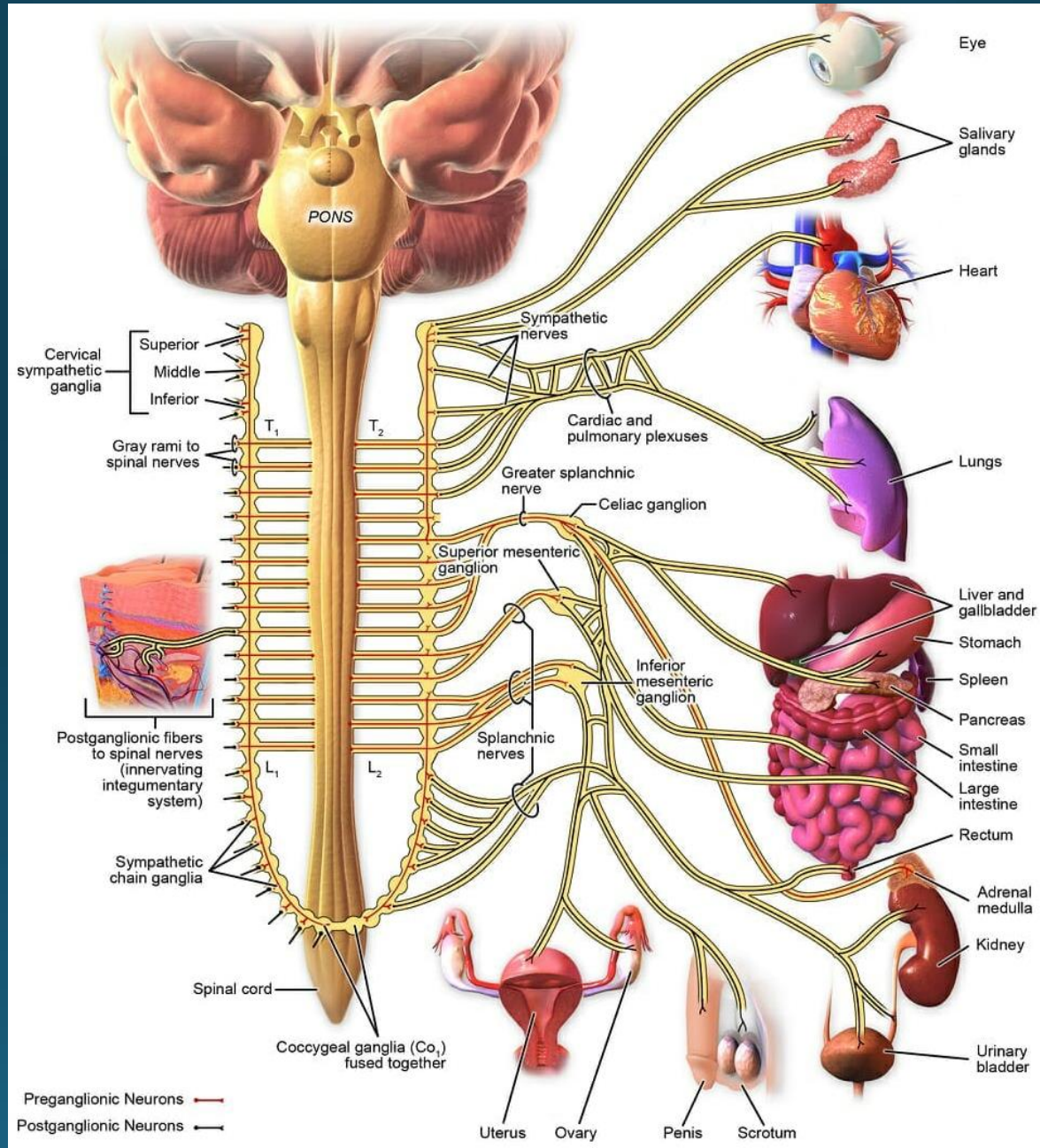
# DRUGS & TECHNIQUES USED



- Local anaesthetics
- Steroids
- Neurolytics –phenol,alcohol
- Radiofrequency lesioning
- Landmark guided
- C arm guided/fluoroscopic guided
- Ultrasound guided
- CT guided



# SYMPATHETIC SYSTEM



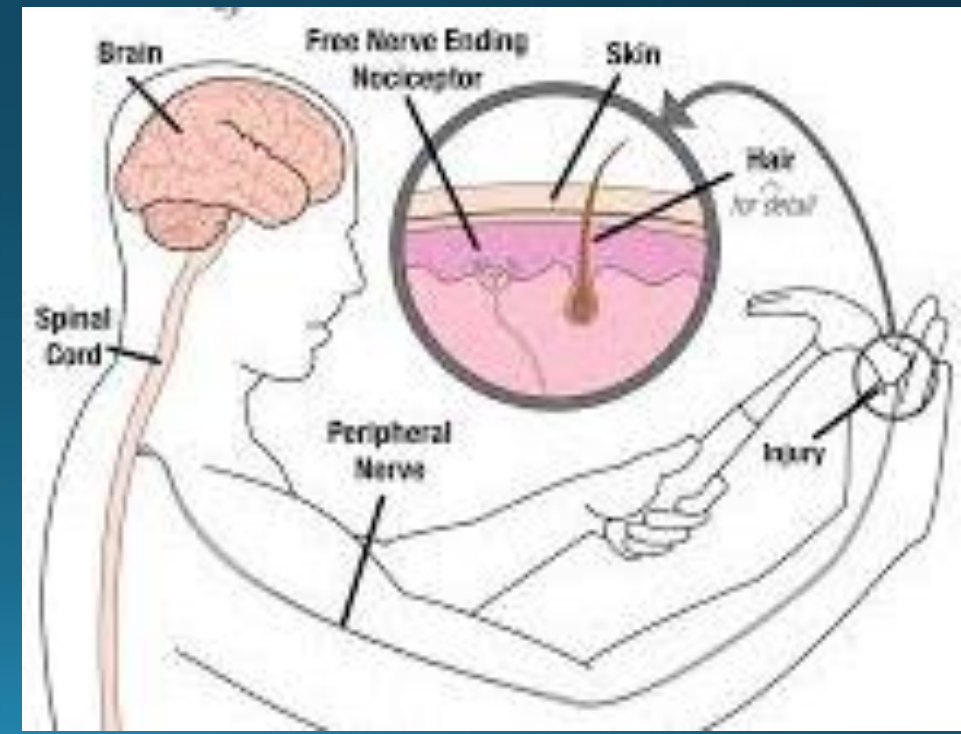
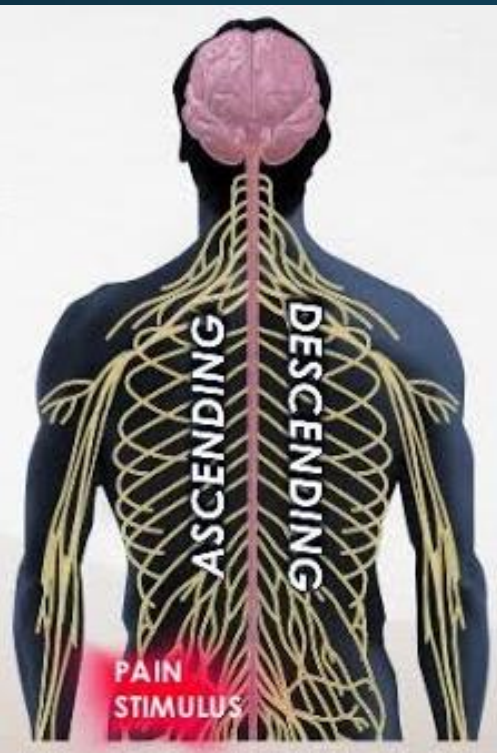
# LIST OF SYMPATHETIC BLOCKS

- Stellate ganglion(cervical sympathetic )block
- Coeliac ganglion block
- Lumbar sympathetic block
- Superior hypogastric plexus block
- Inferior hypogastric block
- Ganglion impar block



# MECHANISM OF PAIN RELIEF

- Interrupts nociceptive signals from viscera to brain
- Relief of ischemic pain due to vasodilation in vasospastic and vasoocclusive conditions

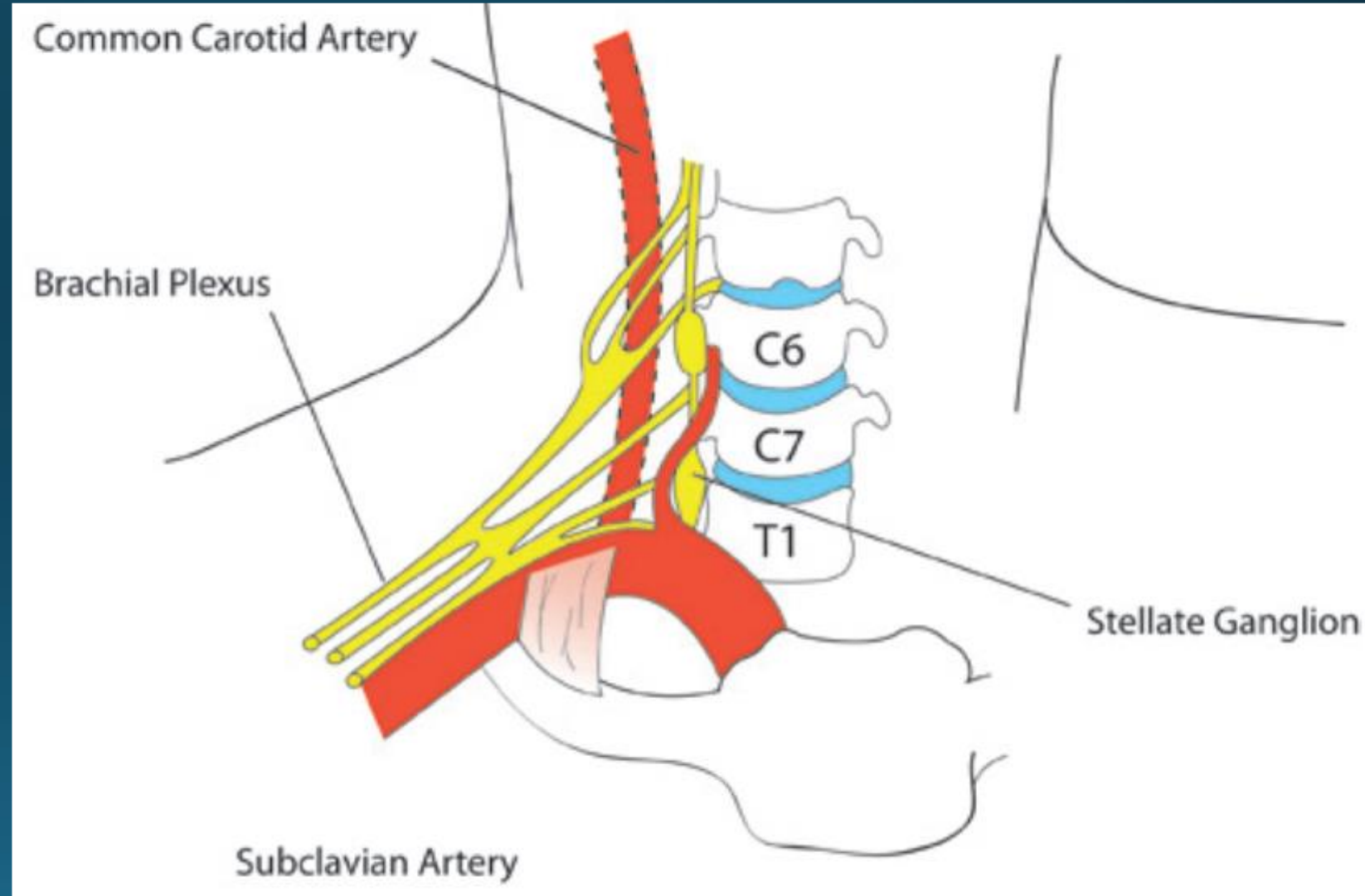




# STELLATE GANGLION BLOCK

## ANATOMY

- Stellate ganglion provides sympathetic supply to upper extremity and half of the face
- Situated on either side of the root of the neck at the level of c6,c7 cervical vertebrae



# Stellate Ganglion Block(SGB)

## Indications

### ***Chronic Pain conditions***

- Complex Regional Pain Syndrome 1&2
- Herpes zoster affecting the face and neck
- Refractory chest pain or Angina
- Phantom limb pain

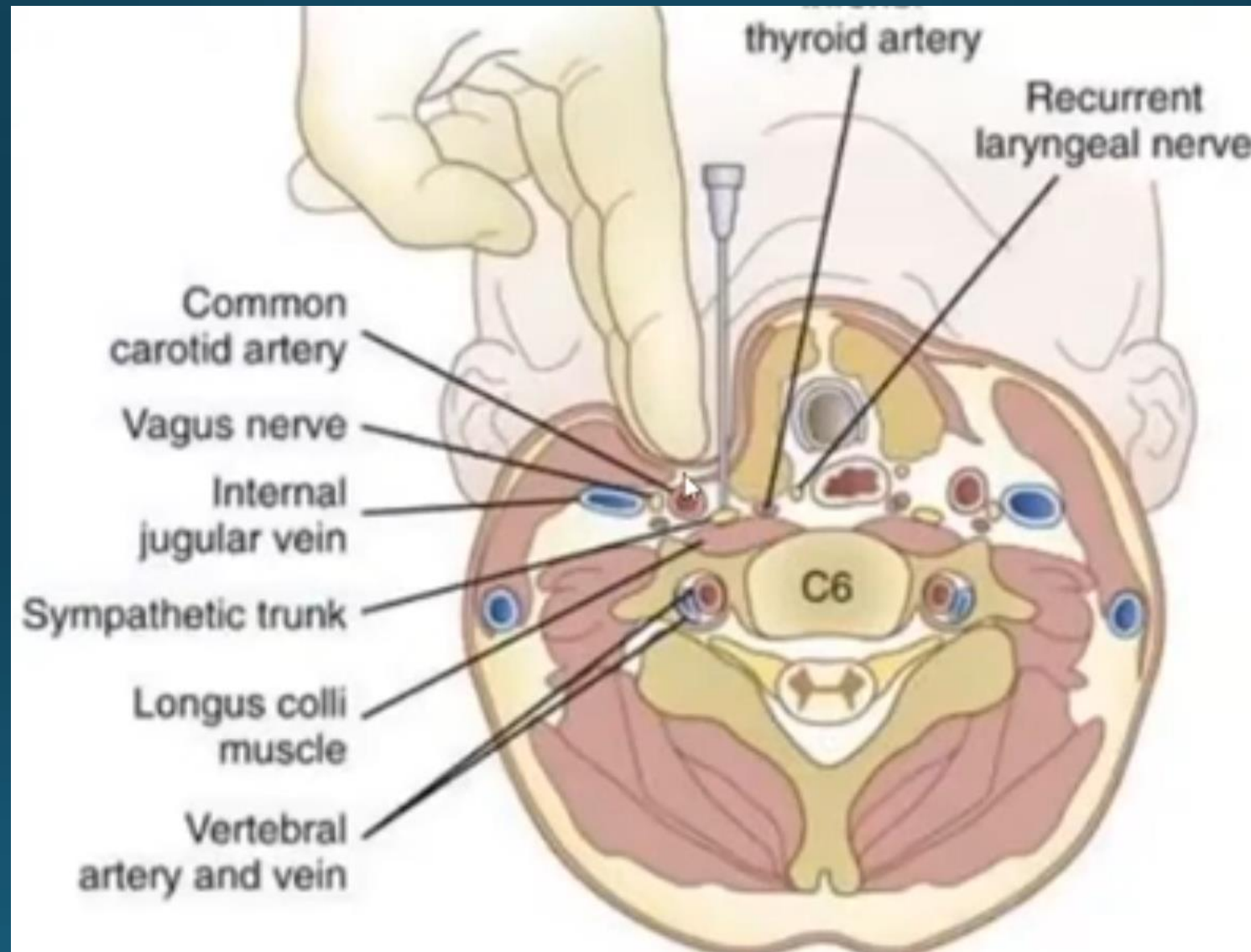
### ***Vascular Disorders of upper limb***

- Raynaud's phenomenon
- Obliterative vascular disease
- Vasospasm
- Scleroderma
- Trauma
- Embolic phenomenon
- Frost bites
- Accidental intraarterial injection of thiopentone or other sclerosing agent

## Contraindications

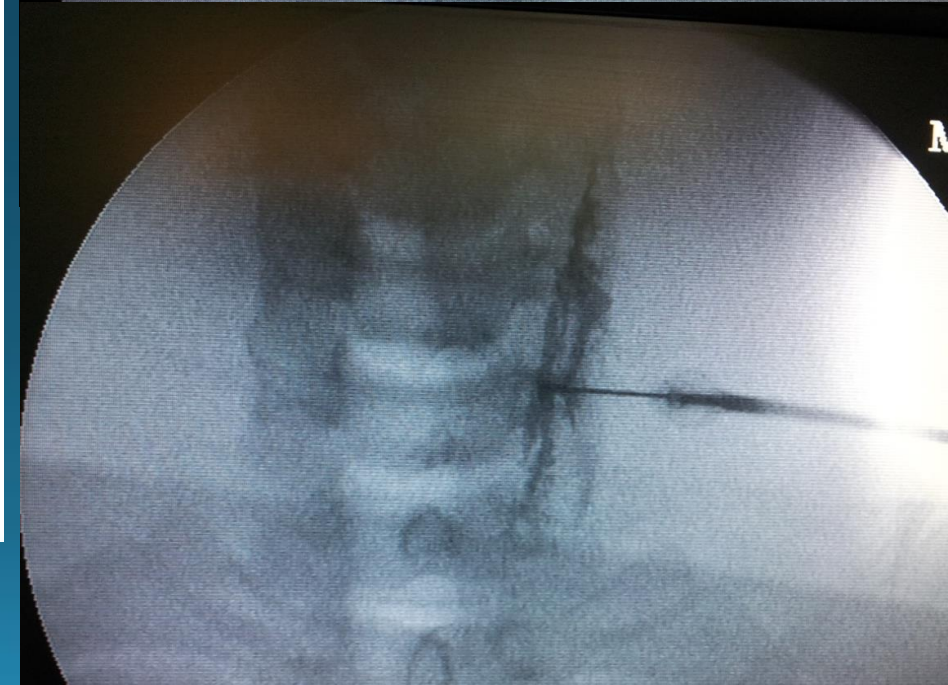
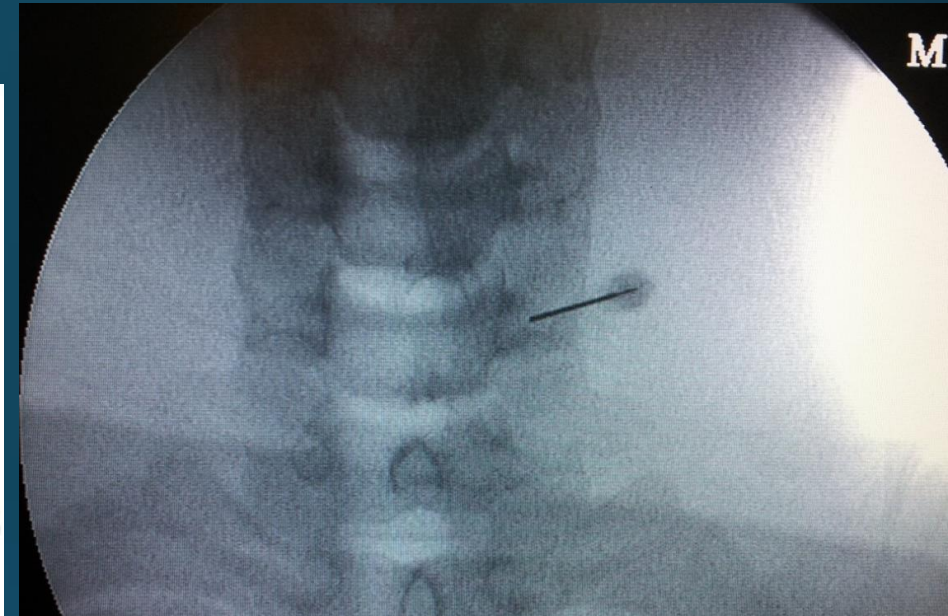
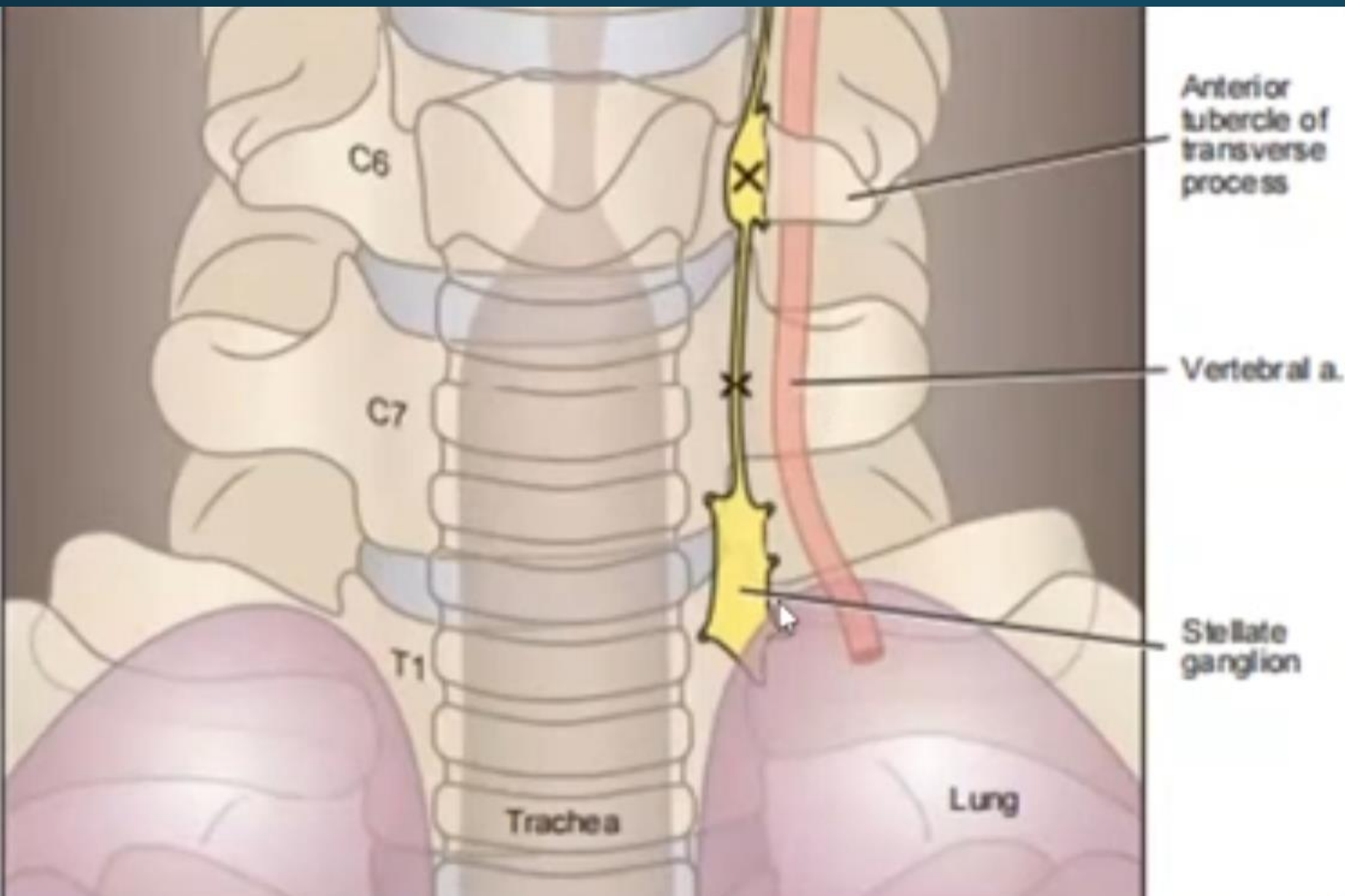
- Anti-coagulated patients or those with coagulopathy
- Recent myocardial infarction
- Glaucoma
- Pre-existing contralateral phrenic nerve palsy (may precipitate respiratory distress)

# SGB LANDMARK TECHNIQUE



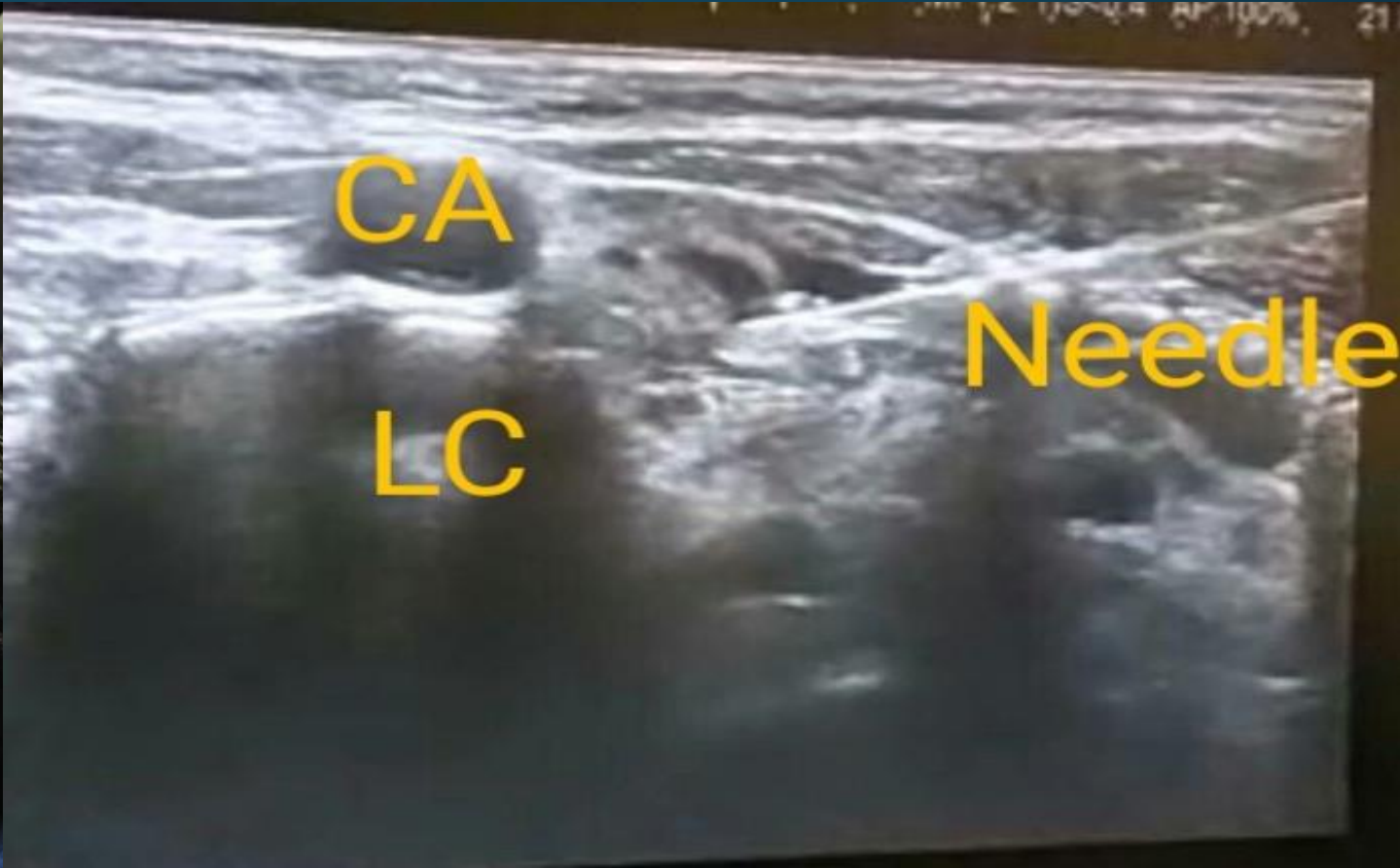


# SGB FLUOROSCOPY ASSISTED



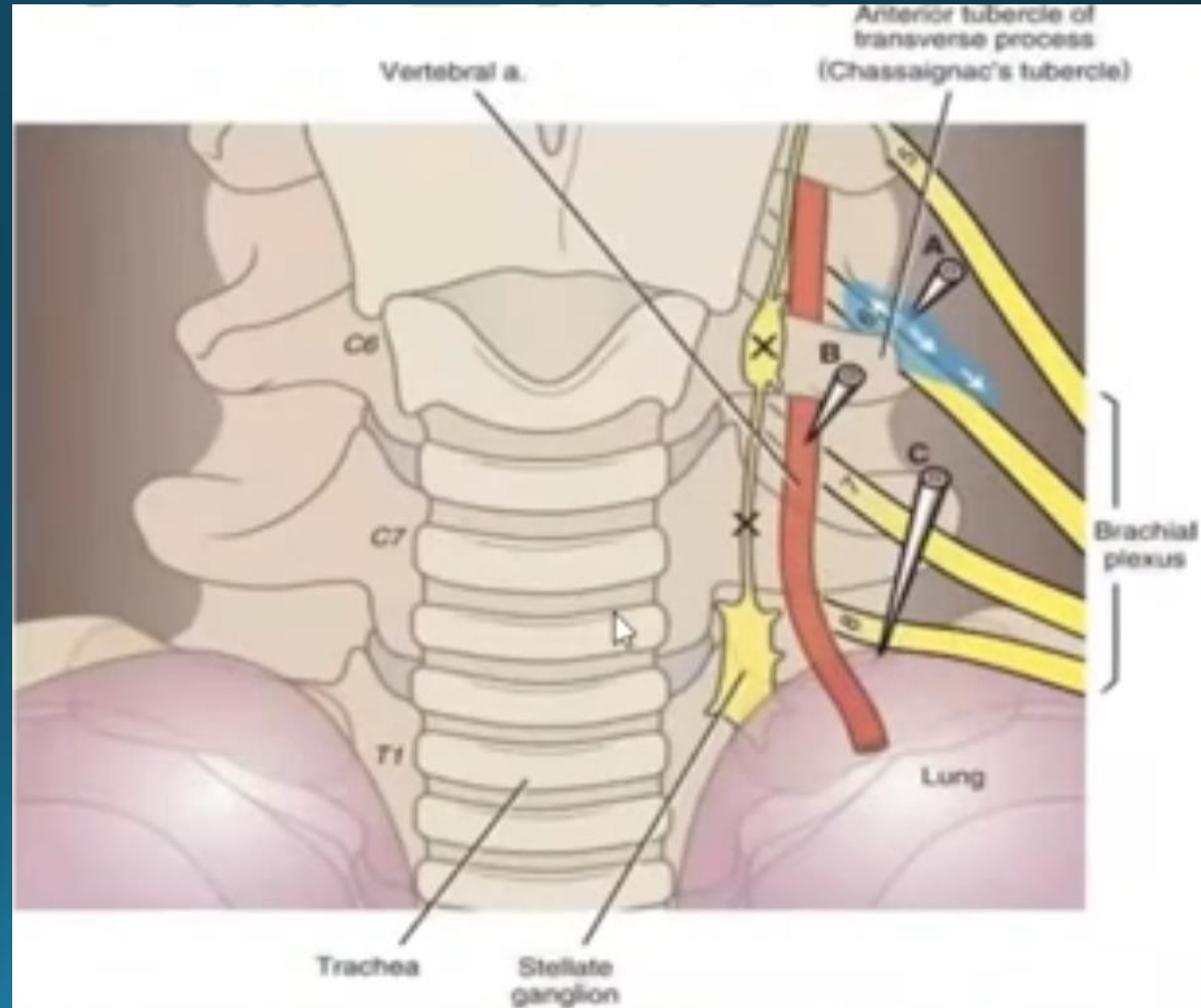


# SGB ULTRASOUND GUIDED



# SGB POSSIBLE RARE COMPLICATIONS

- Injury to the surrounding vital structures like pleura , esophagus, carotid artery, nerves.
- Horner's syndrome :Miosis,Partial ptosis,Anhidrosis:Confirmatory sign
- Hematoma formation
- Hoarseness due recurrent laryngeal nerve injury
- Infection



# CASE REPORT 1:

## SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) WITH VASCULITIS

- 35 yr, female
- C/o non healing wound and black spots on three fingers of right hand
- Persistent burning pain, no relief with conventional analgesics

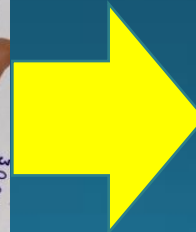
### Drugs administered:

- 0.25% sensorcaine (1ml), Inj Dexamethasone 4mg, Inj. Methylprednisolone 40mg

Prior to block



After 10 days



Dorsal view after 6 months of block



Palmar view after 6 months of block





# CASE REPORT 2: RIGHT HAND CRPS

- 55 yrs,F
- Persistent pain on the right hand
- No relief with conventional analgesics
- Diagnosis:CRPS RIGHT HAND





# PATIENT IMPROVEMENT VIDEO

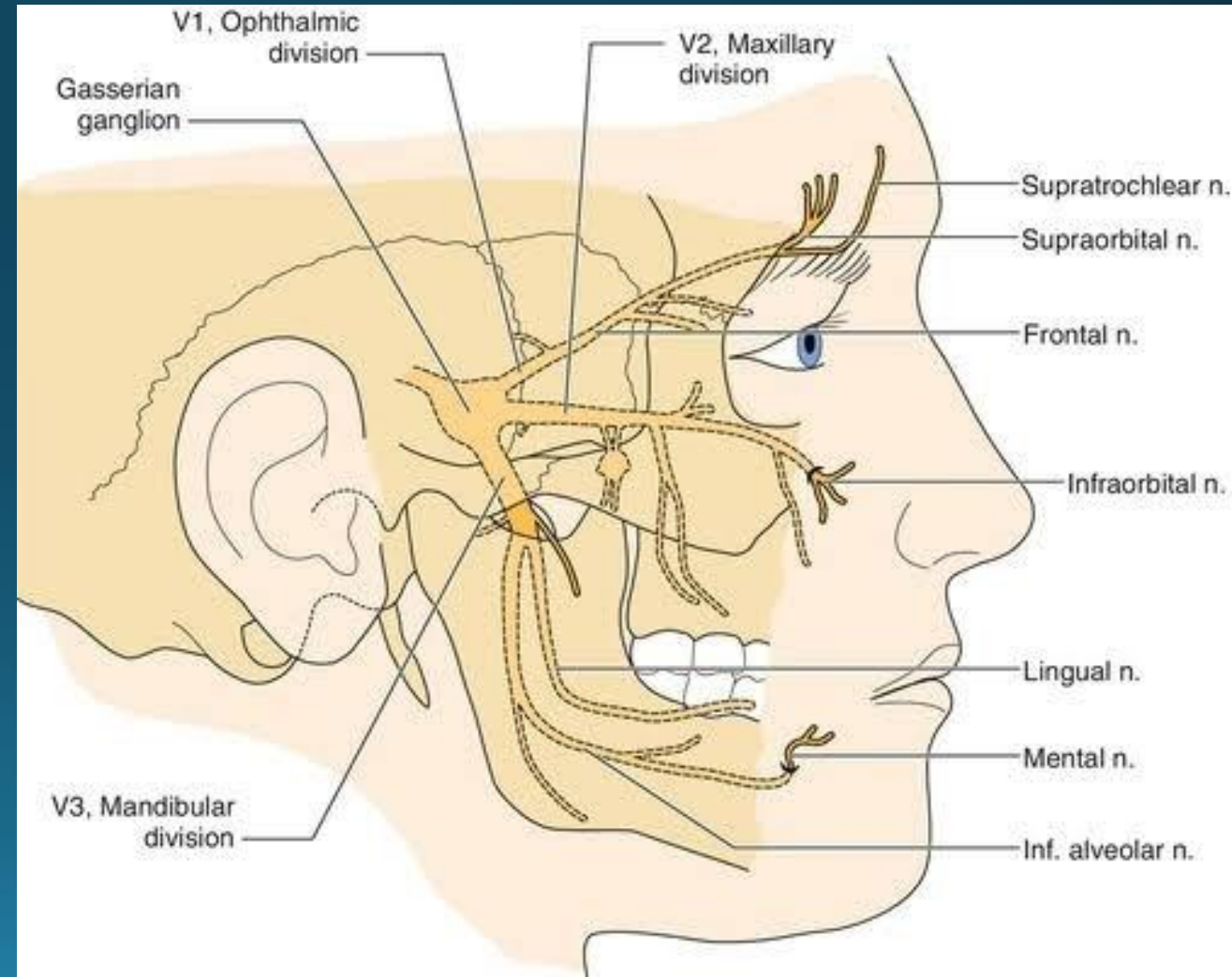


Consent for publication in medical meeting obtained from patient

# TRIGEMINAL/GASSERIAN GANGLION BLOCK

# TRIGEMINAL NERVE :ANATOMY

- Largest and one of the most complex cranial nerves
- 3 divisions:  
➔ Ophthalmic,Maxillary,Mandibular
- Inside the skull on **each side of the head.**
- **Site:**depression in the middle cranial fossa



# TRIGEMINAL NEURALGIA

- Severe electric shock like pain typically involving one side of face



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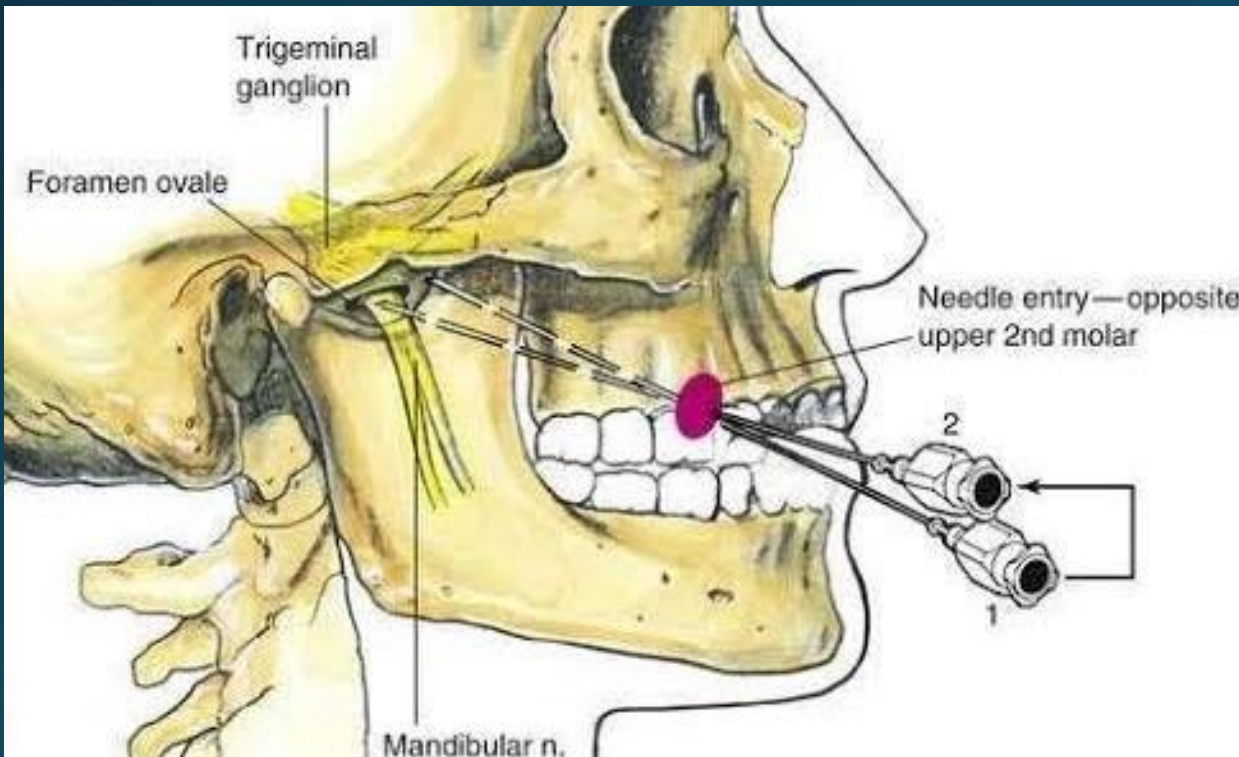
# TRIGEMINAL GANGLIONBLOCK:

## TECHNIQUE:

### DRUGS ADMINISTERED:

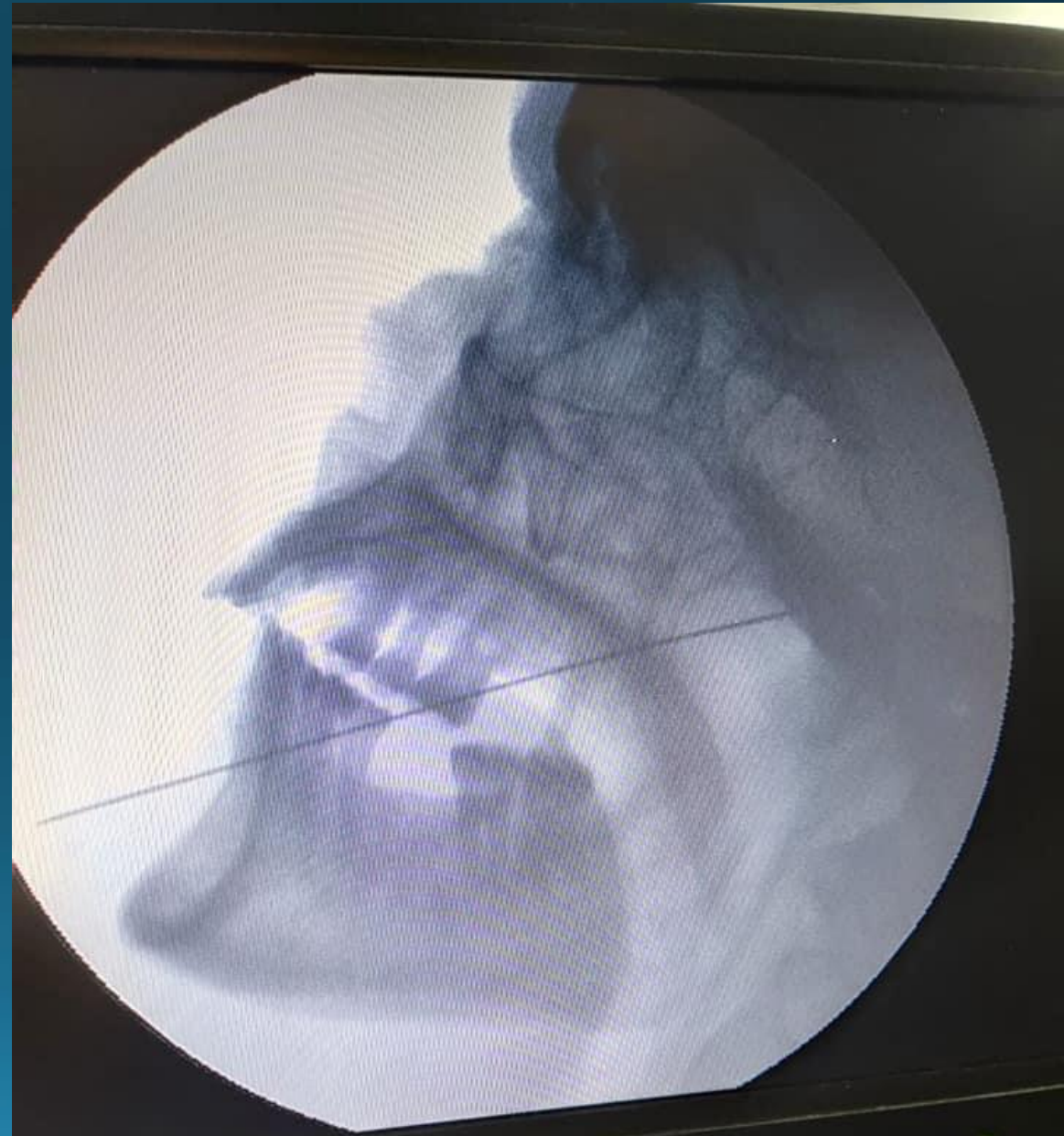
1ml,0.25% sensorcaine,  
Inj dexamethasone 4mg,  
Inj MPS 40mg

**RF ABLATION** :Under  
fluoroscopy control,  
controlled temperatures are  
USED TO DESTROY  
SMALLER PAIN FIBERS  
SELECTIVELY





# TRIGEMINAL GANGLION BLOCK



# PATIENT IMPROVEMENT AFTER BLOCK

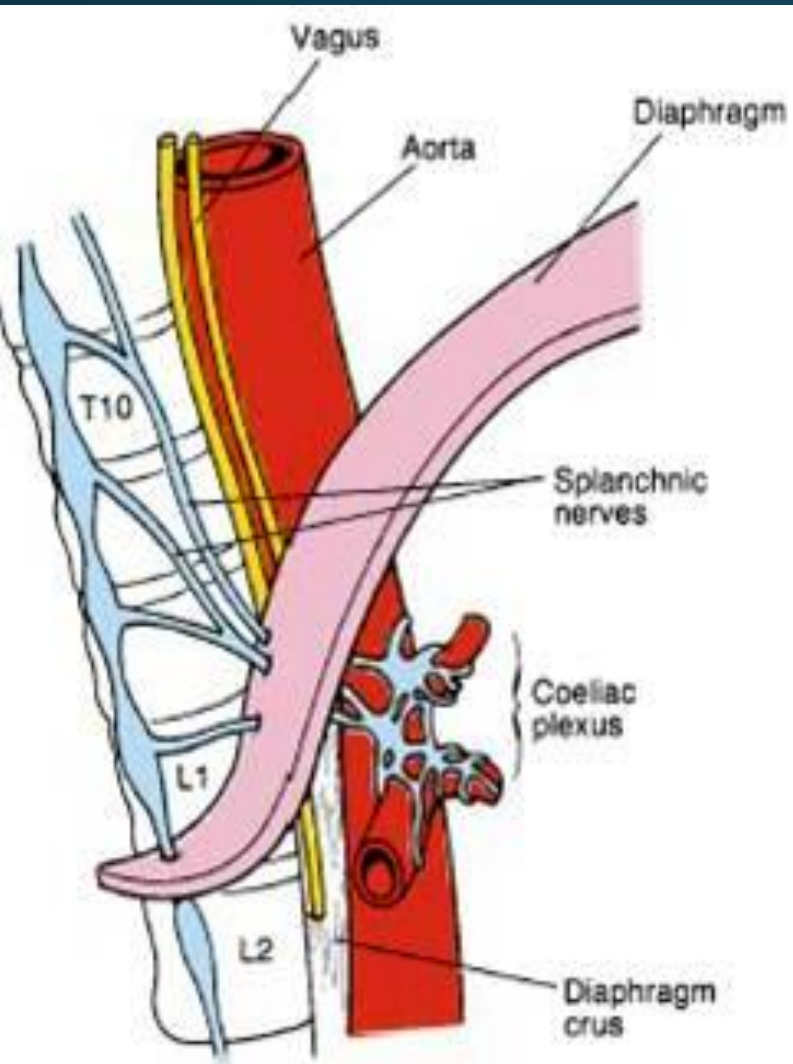


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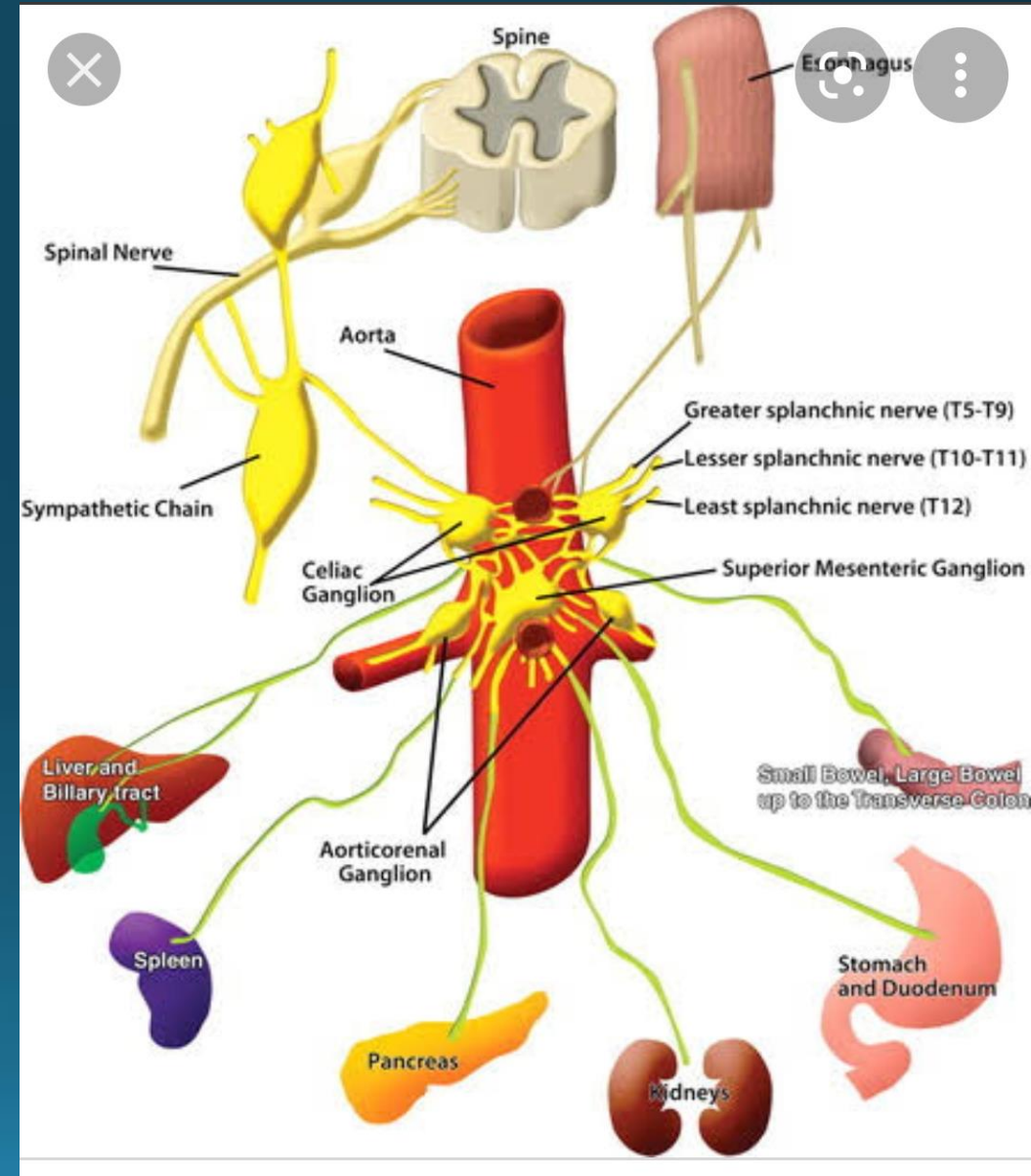
# COELIAC PLEXUS BLOCK



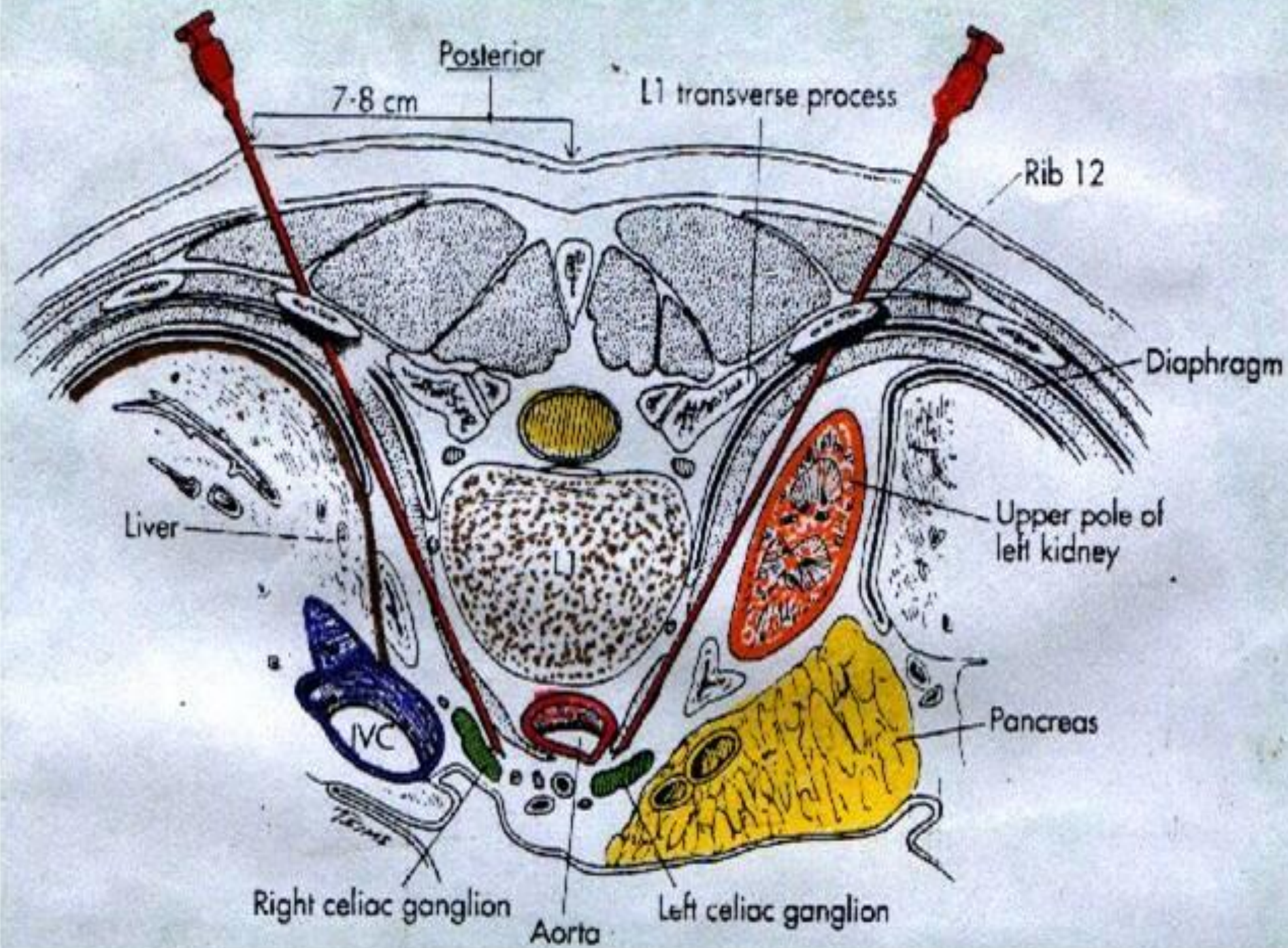
# COELIAC PLEXUS ANATOMY



- Ganglia lie on each side of T11 (aorta - posteriorly, pancreas - anteriorly, IVC - laterally).
- Supplying the upper abdominal organs
- **(liver, gall bladder, spleen, stomach, pancreas, kidneys, small bowel, and 2/3 of the large bowel).**





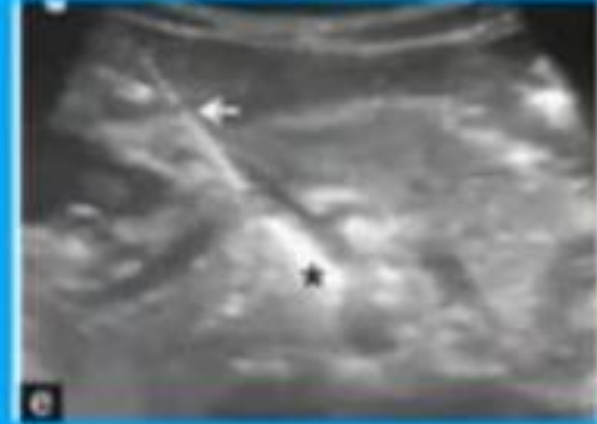


# CPB TECHNIQUES

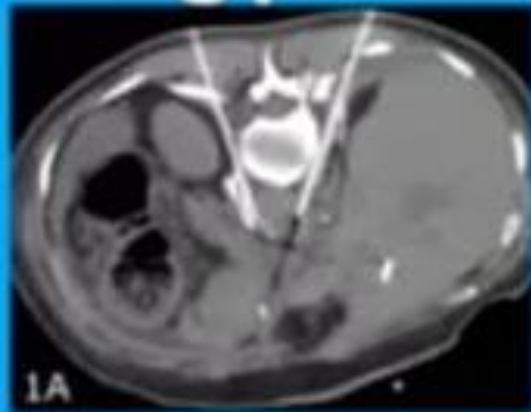
FLOUROSCOPY



USG



CT



EUS





# COELIAC PLEXUS BLOCK

## INDICATIONS

- For relief of pain from intra-abdominal organs.
- **CHRONIC PAIN** –  
e.g. chronic pancreatitis
- **CANCER PAIN –  
PALLIATIVE CARE**  
for upper abdominal organ  
cancer pain, Ca pancreas,  
Ca stomach, Ca gall bladder

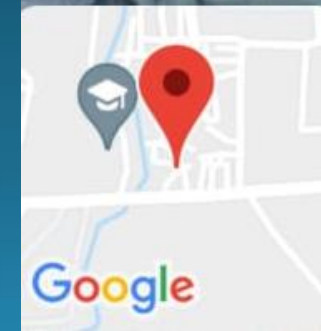
## CONTRAINDICATION

- Bleeding and infection
- Large aortic aneurysm



# CPB TECHNIQUE

- Patient: prone position.
- X-ray screening, i.v sedation, L.A infiltration of the superficial layers.
- I.V fluids-required pre-block to reduce the risk of hypotension after the procedure
- Two needle insertions: one on each side to block both of the coeliac ganglia.



Pimpri-Chinchwad, Maharashtra, India

Pimpri Chinchwad Rd, MIDC, Pimpri Colony,

Pimpri-Chinchwad, Maharashtra 411026, India

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Long E 73° 49' 25.3596"

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# CASE REPORT 1:CA PANCREAS

- 45 yr, M, k/c/o Ca Pancreas
- Persistent abdominal pain 2 months
- No relief with conventional analgesics







Drugs administered: 10ml, 0.25% sensorcaine, Inj alcohol 60%, 20ml



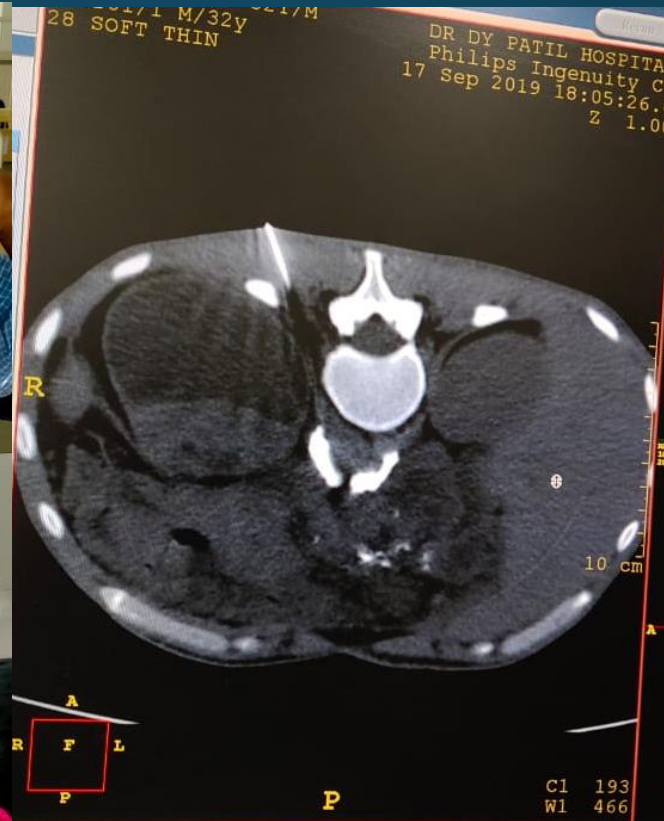
### Pimpri-Chinchwad, Maharashtra, India

Dr D Y Patil Medical college and Hospital -Private OPD, Sant Tukaram  
Nagar, Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411018, India  
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# CASE REPORT 2: CHRONIC PANCREATITIS

- 32 yr, M, k/c/o Chronic Pancreatitis, Ex alcoholic
- Severe abdominal pain off and on, 1 yr, No relief with conventional analgesics
- Treatment received- Coeliac Plexus block, CT Guided, trans aortic, Alcohol
- Good Pain relief 2 weeks follow up





# PATIENT IMPROVEMENT AFTER BLOCK



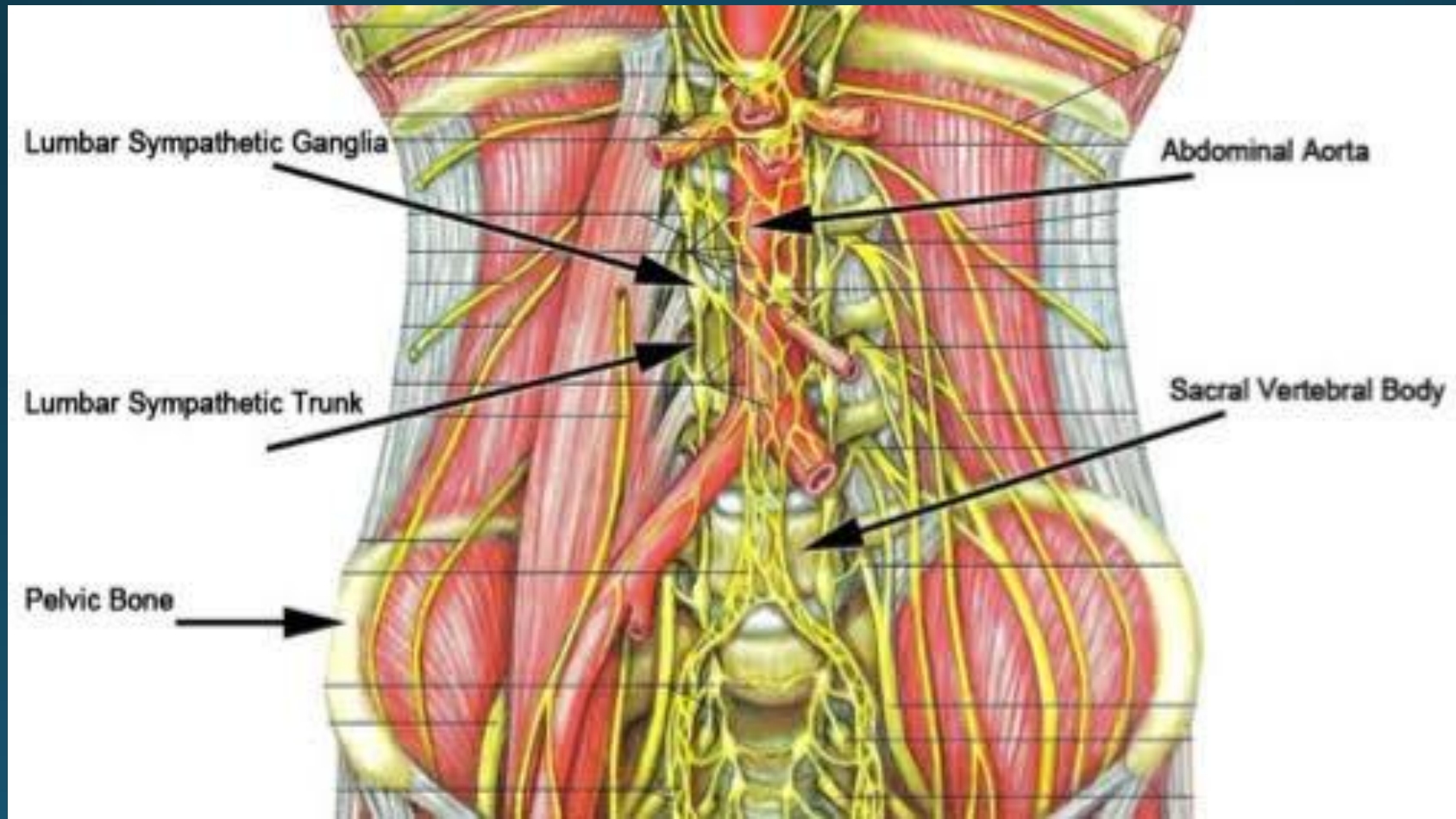
# POSSIBLE RARE COMPLICATIONS

- Severe hypotension
- Bleeding
- Intravascular injection
- Upper abdominal organ puncture
- Paraplegia
- Sexual dysfunction
- Lumbar nerve root irritation

# LUMBAR SYMPATHETIC BLOCK

# LUMBAR SYMPATHETIC ANATOMY

- Anterior divisions of L1, L2, L3 and the greater part of L4.
- The L1 root often receives a branch from T12.
- Situated most commonly in the posterior one third of the psoas major muscle, anterior to the transverse processes of the lumbar vertebrae.





# INDICATIONS

- Vascular Insufficiency
- Complex Regional Pain Syndrome, Reflex Sympathetic Dystrophy
- Herpes Zoster Infection (Shingles) Involving The Legs
- Peripheral Neuropathy

# CASE REPORT 1: ANGIOLEIOMYOMA

- 60 yrs, F
- Non healing ulcer on Rt foot with severe pain, not controlled with conventional analgesics
- k/c/o Angioleiomyoma with impending gangrene and non healing ulcer with severe burning pain
- Patient had suicidal attempts due to unbearable pain
- After lumbar sympathetic block pain relief upto 90-95%, healing started

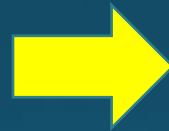




**Prior to block**

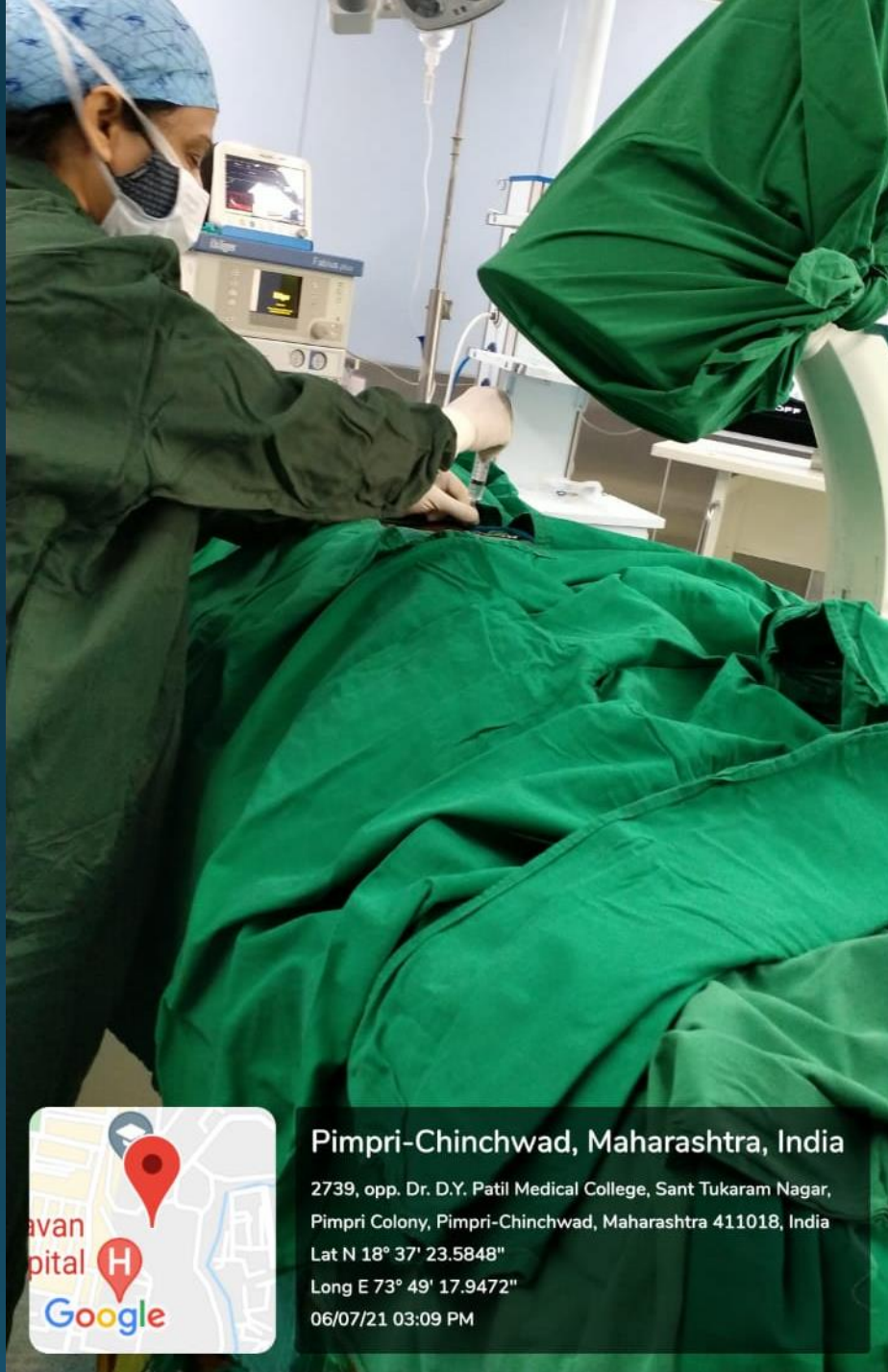
### **Drugs administered**

- 0.25% bupivacaine, 10ml
- 40 mcg clonidine
- 80 mg triamcinolone



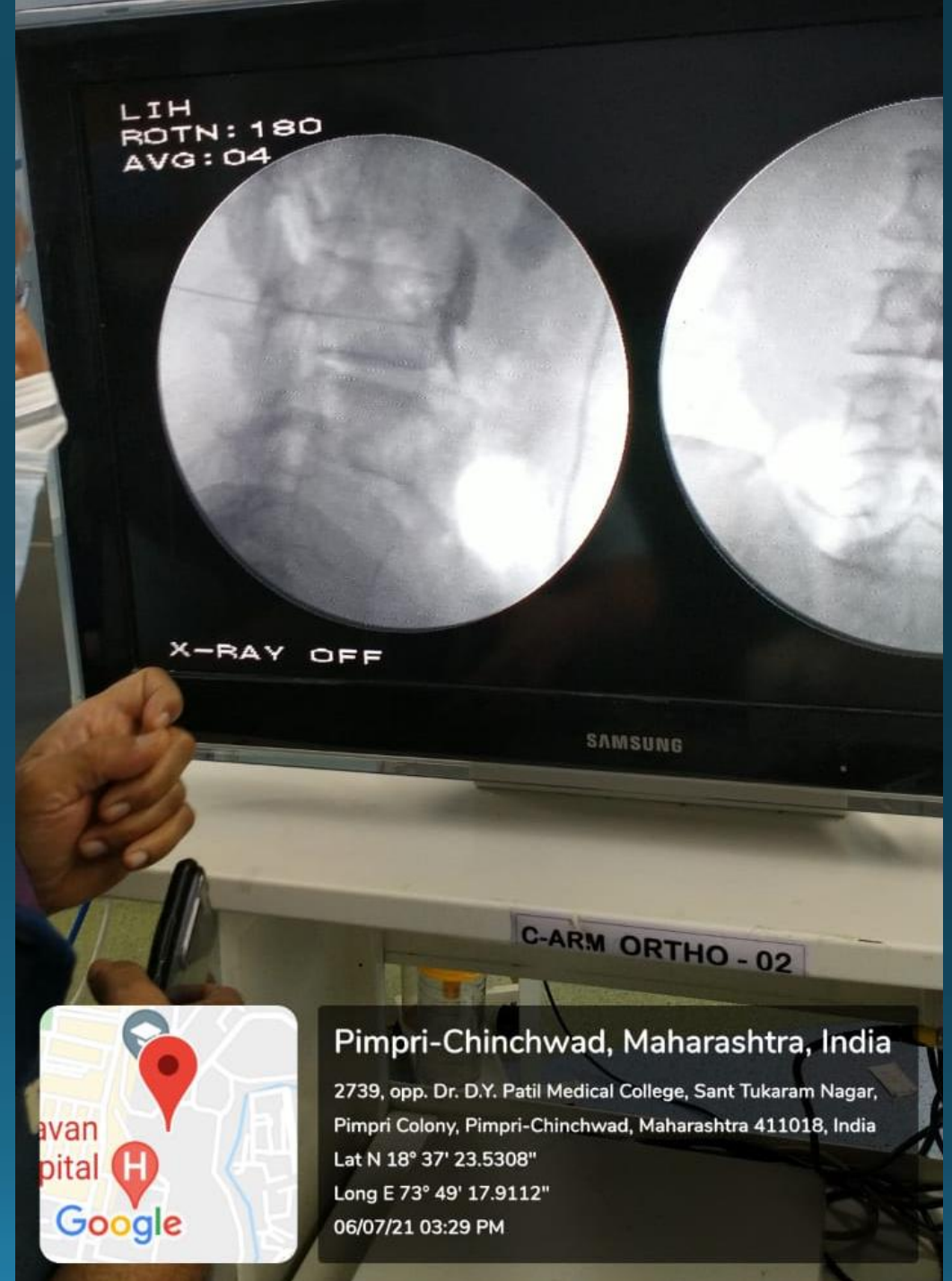
**One week post block**





### Pimpri-Chinchwad, Maharashtra, India

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Pimpri Colony, Pimpri-Chinchwad, Maharashtra 411018, India  
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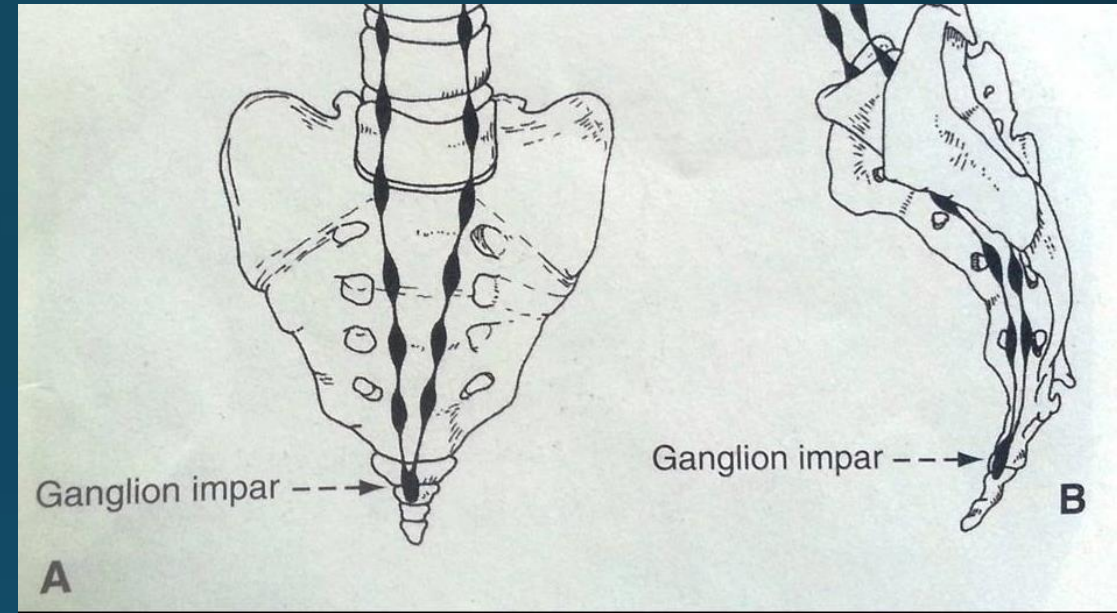
### Pimpri-Chinchwad, Maharashtra, India

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# GANGLION IMPAR/ COCCGOYDYNIA

- Pain in the terminal segment of the spine caused by abnormal sitting and standing posture.
- Usually managed conservatively, nonresponsive patients, **ganglion impar block** is used as a good alternate modality for pain relief.
- **Anatomy:** situated in the retroperitoneal space behind the rectum around the sacrococcygeal joint or directly in front of the coccyx.
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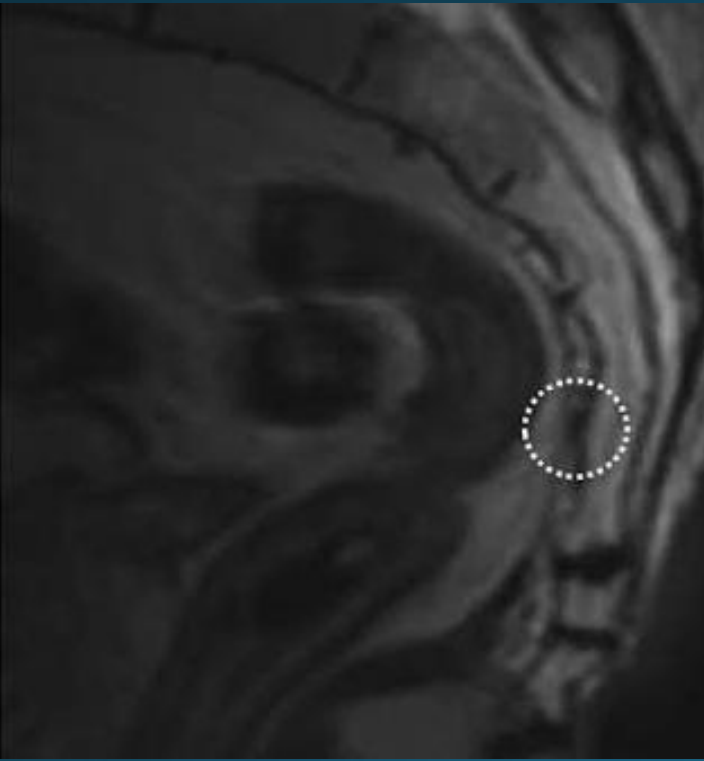


# TECHNIQUE



## Drugs administered

- Inj xylocard 1%,4ml
- Inj kenocort,40mg



**Needle Position**



**Needle with contrast**



# CONCLUSION

**“WE CANT DO ANYTHING  
FOR YOU!”**





**THANK YOU**