

CLINICAL MEET

INTERVENTIONAL TECHNIQUES

IN

PAIN MANAGEMENT

DEPT OF ANAESTHESIA

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

PAIN CONDITIONS TREATED

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 न्यूराल्जिया

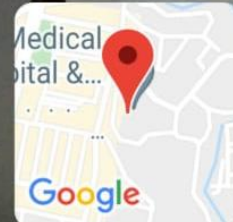
कॅन्सरच्या वेदना

मधुमेही रुग्णांच्या वेदना

नागीण

स्नायूंची वेदना

संपूर्ण शरीरातील वेदना



Pimpri-Chinchwad, Maharashtra, India

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Tukaram Nagar, Pimpri Colony, Pimpri-Chinchwad, Maharashtra
411018, India

Lat N 18° 37' 26.6412"

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Dr. D. Y. Patil Hospital & Research Centre
रुग्णालय व संशोधन केंद्र, पिंपरी, पुणे

वेदना निवारण केंद्र

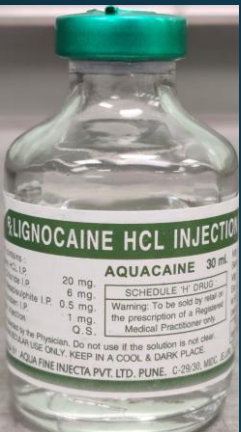
ह्या वेदना सहन करू नका

डोकेदुखी, मायग्रेन,
स्नायूमुळे होणारी डोकेदुखी,
ट्रायजिमिनल न्यूराल्जिया,
मानदुखी,
स्पाँडिलोसिस,
खांदे दुखी,
पोट दुखी, पॅन्क्रियाटायटीस
हातापायातील वेदना,
जुने फ्रॅक्चर,
जखम झालेल्या
ठिकाणी होणाऱ्या वेदना,
पाठ व कंबर दुखी,
स्लिप डिस्क,
सायटिका,
गुडघे दुखी, संंधिवात,
नागीण, डायबेटिक न्यूरॉपॅथी
कॅन्सरमुळे होणाऱ्या वेदना
फायब्रोमायाल्जिया,
गॅंग्रिन, फॅन्टम पेन, टाच दुखी
अधिक काळ राहिलेल्या
कोणत्याही वेदना

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

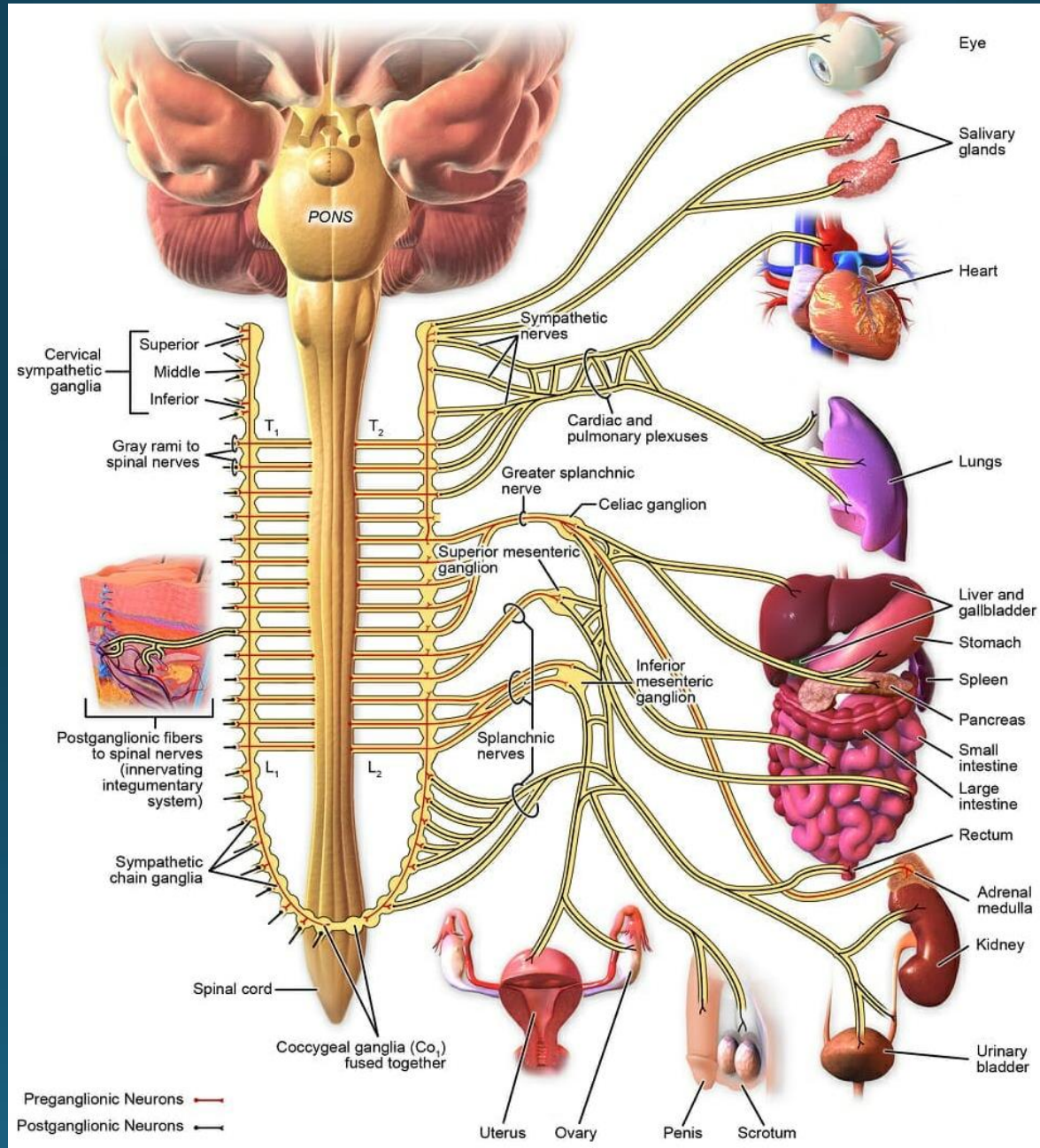
DRUGS & TECHNIQUES USED



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



SYMPATHETIC SYSTEM

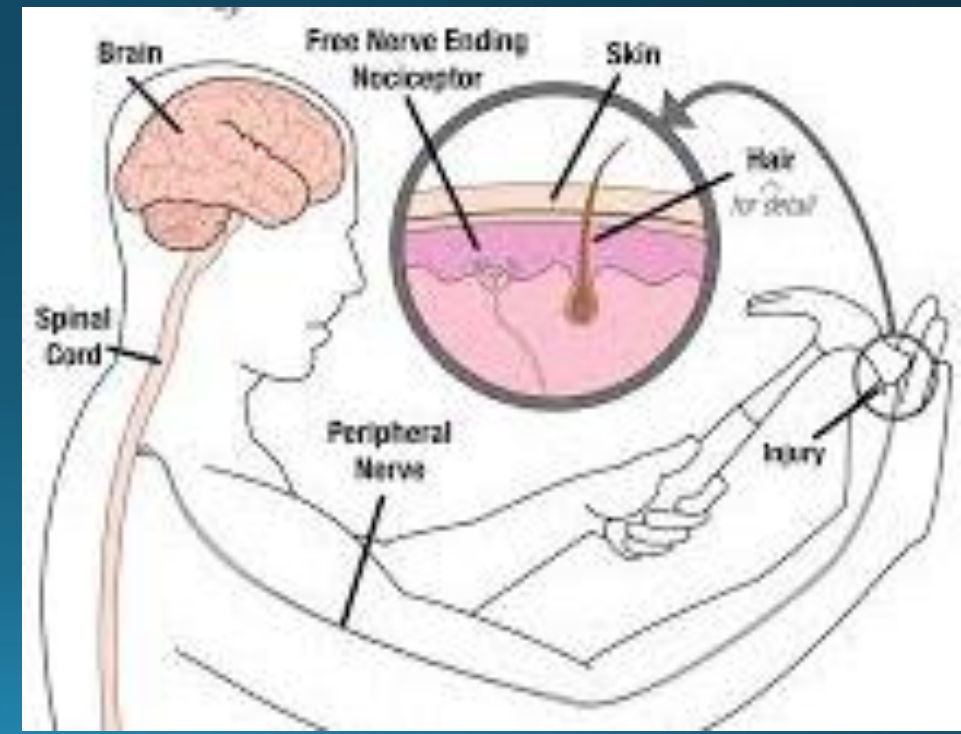
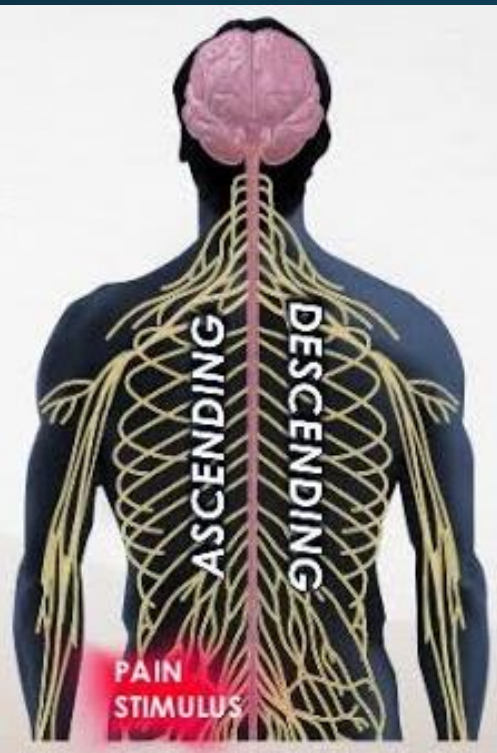


LIST OF SYMPATHETIC BLOCKS

- 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



WE DISCUSS THE FOLLOWING

- Stellate ganglion block(sgb)
- Trigeminal/gasserian ganglion block
- Coeliac plexus block
- Lumbar sympathetic block
- Ganglion impar

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

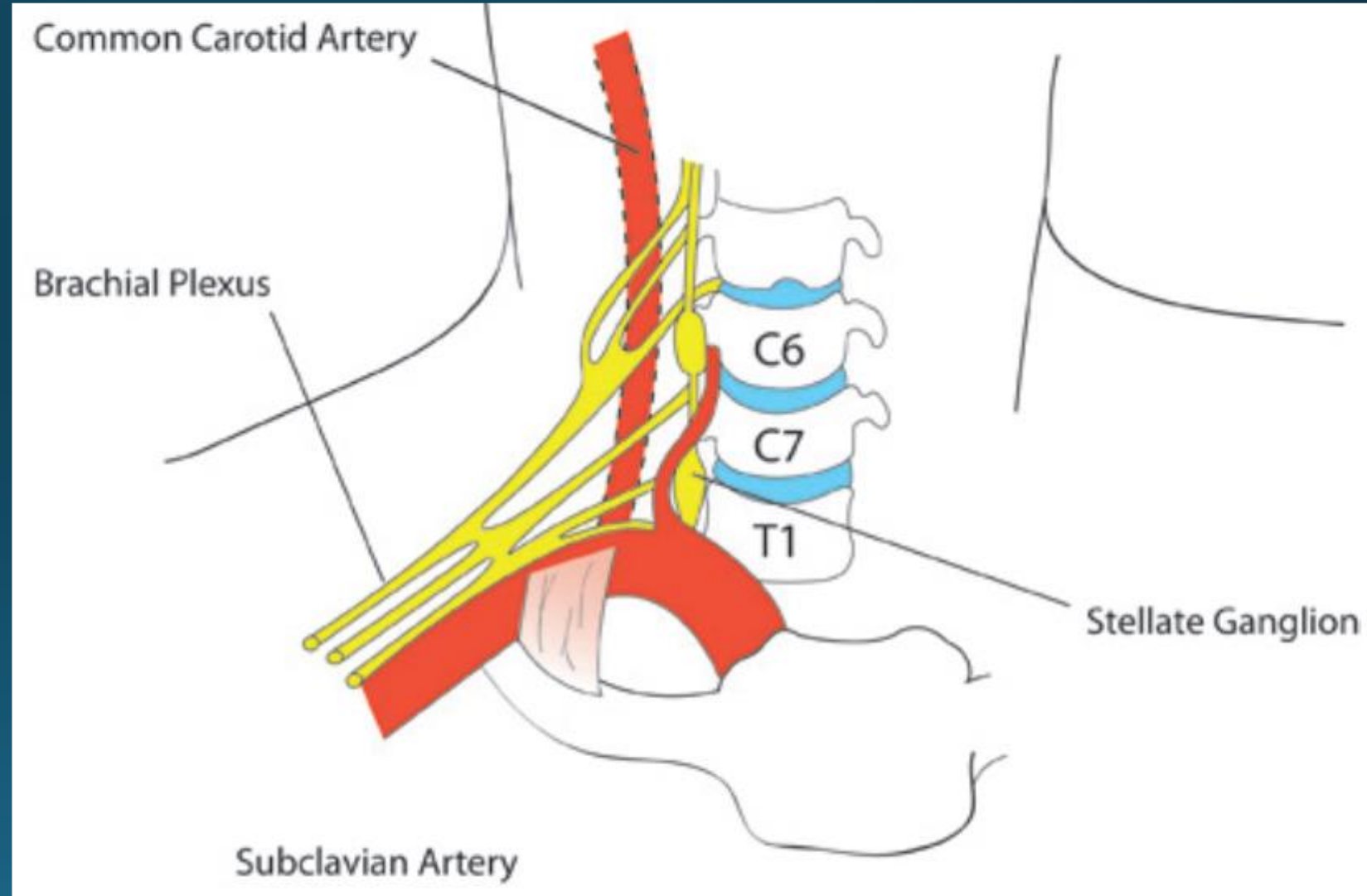
Contraindications

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

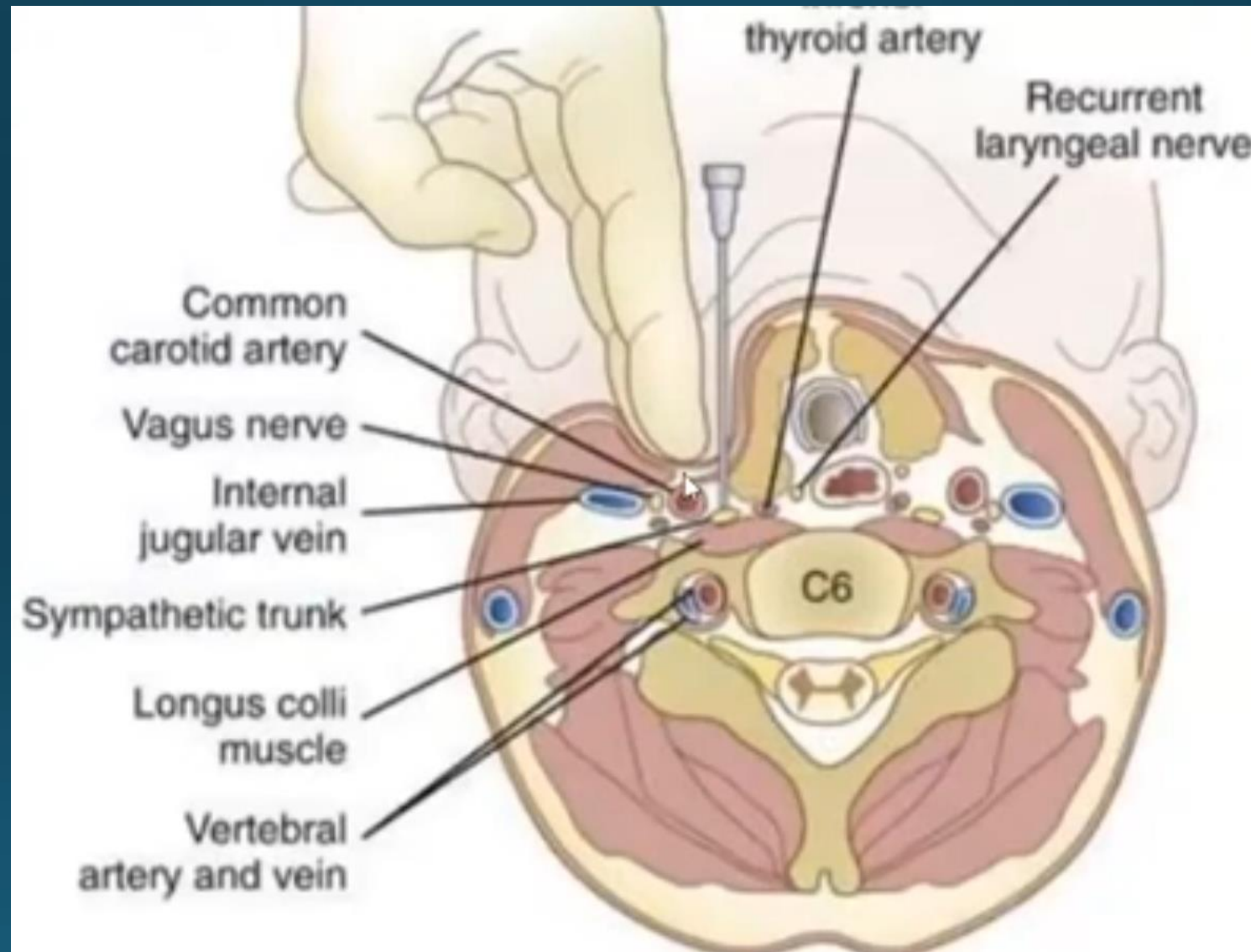
STELLATE GANGLION BLOCK(SGB)

ANATOMY

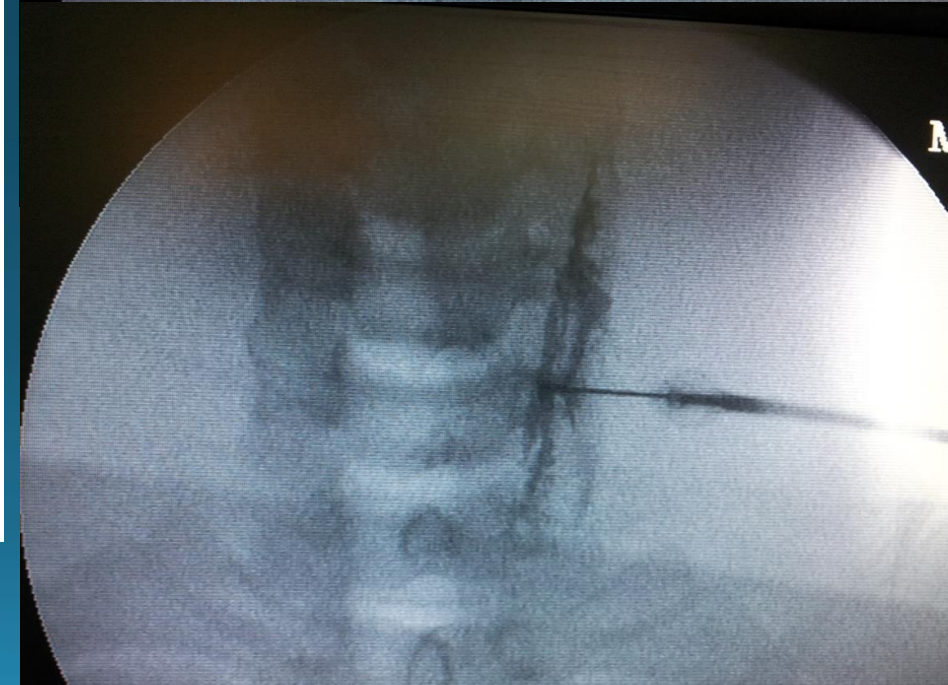
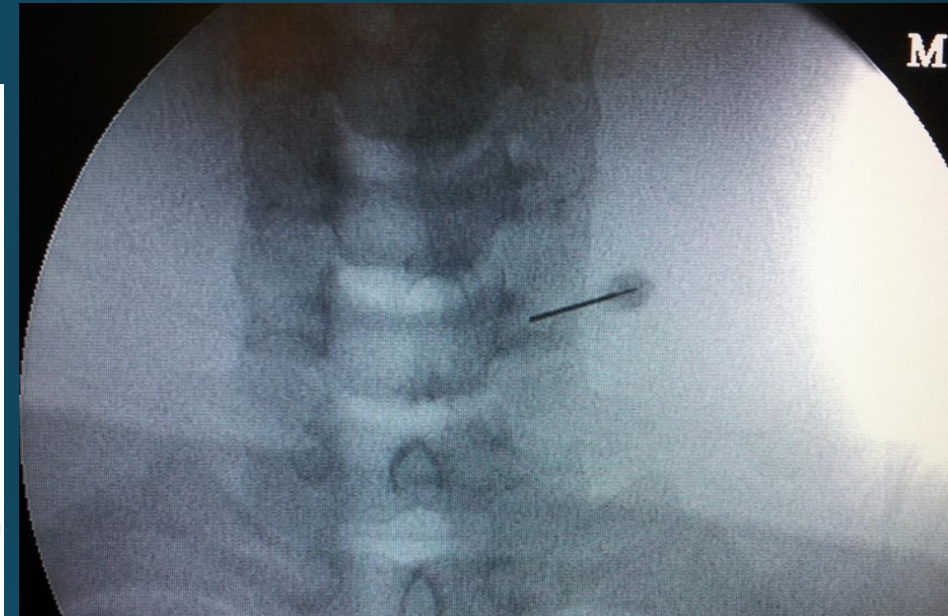
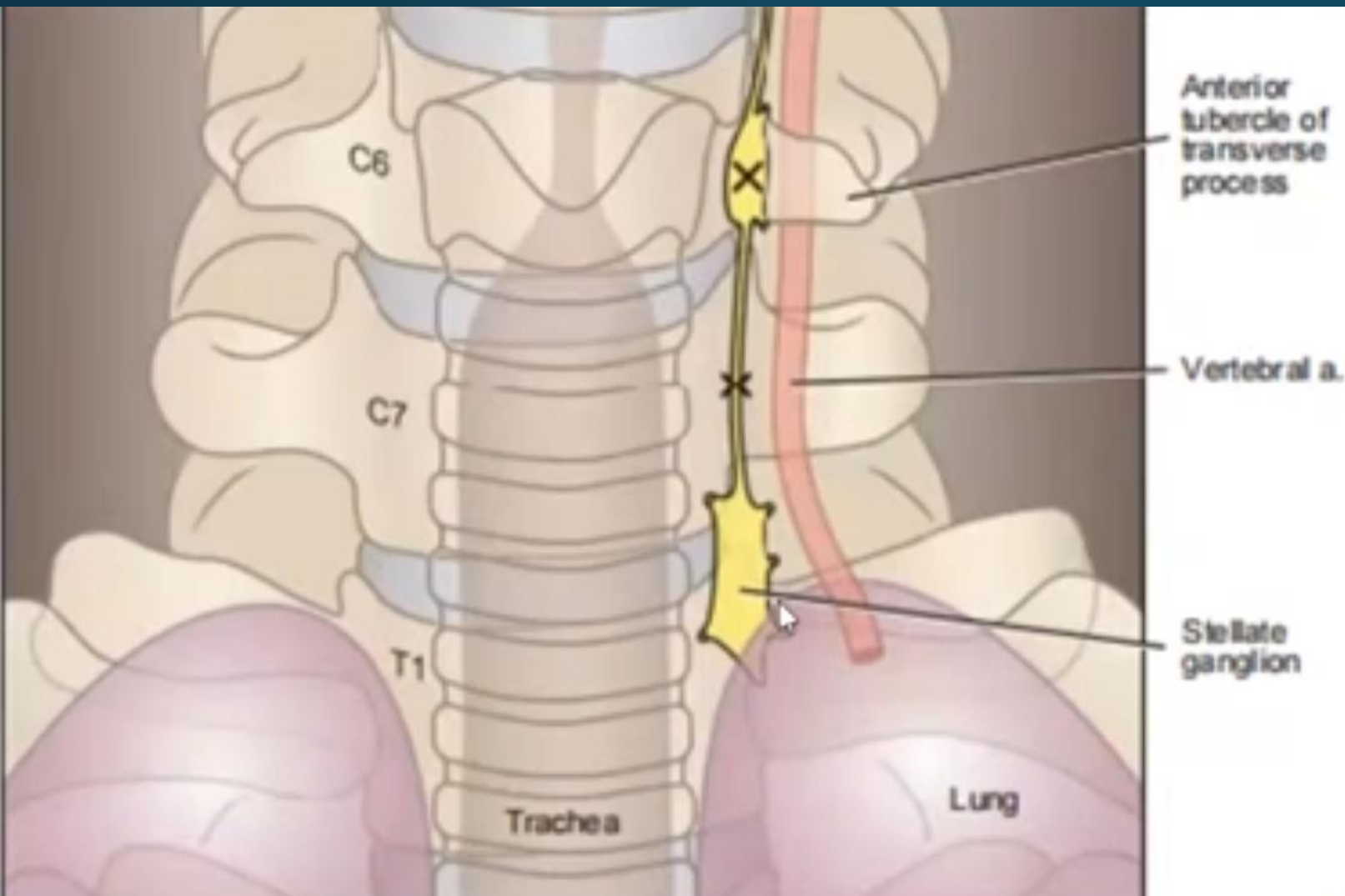
- Stellate ganglion provides sympathetic supply to upper extremity and half of the face
- Situated on either side of the root of the neck at the level of c6,c7 cervical vertebrae



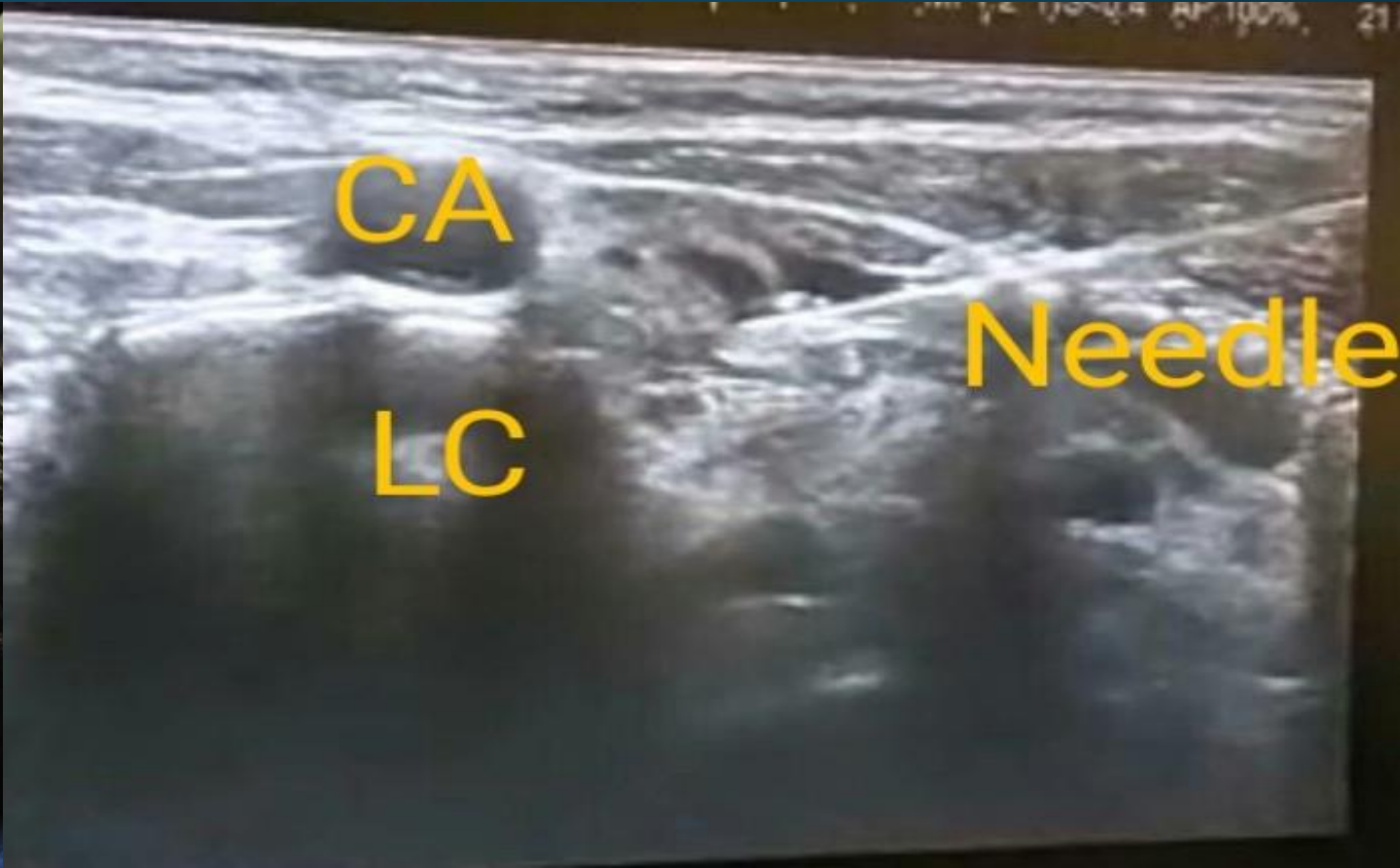
SGB LANDMARK TECHNIQUE



SGB FLUOROSCOPY ASSISTED

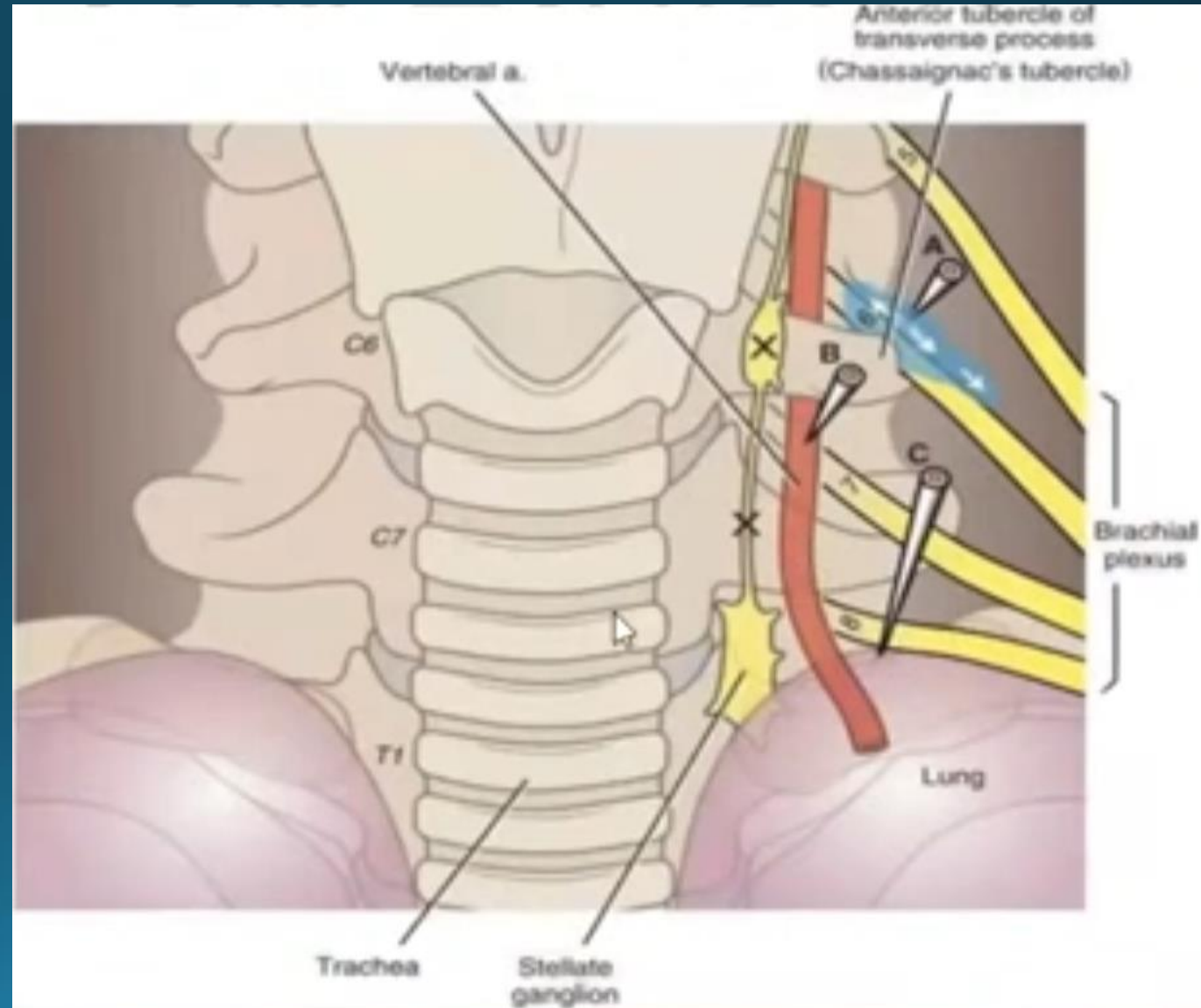


SGB ULTRASOUND GUIDED



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

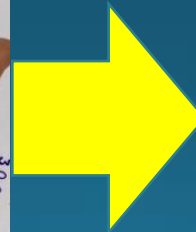
Drugs administered:

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

Prior to block



After 10 days



Dorsal view after 6 months of block

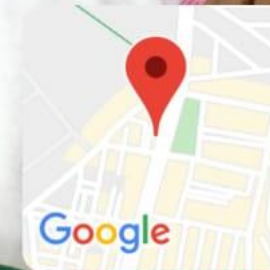


Palmar view after 6 months of block



CASE REPORT 2: RIGHT HAND CRPS

- 55 yrs,F
- Persistent pain on the right hand
- No relief with conventional analgesics
- Diagnosis:
Complex Regional Pain Syndrome,Rt hand



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PATIENT IMPROVEMENT VIDEO

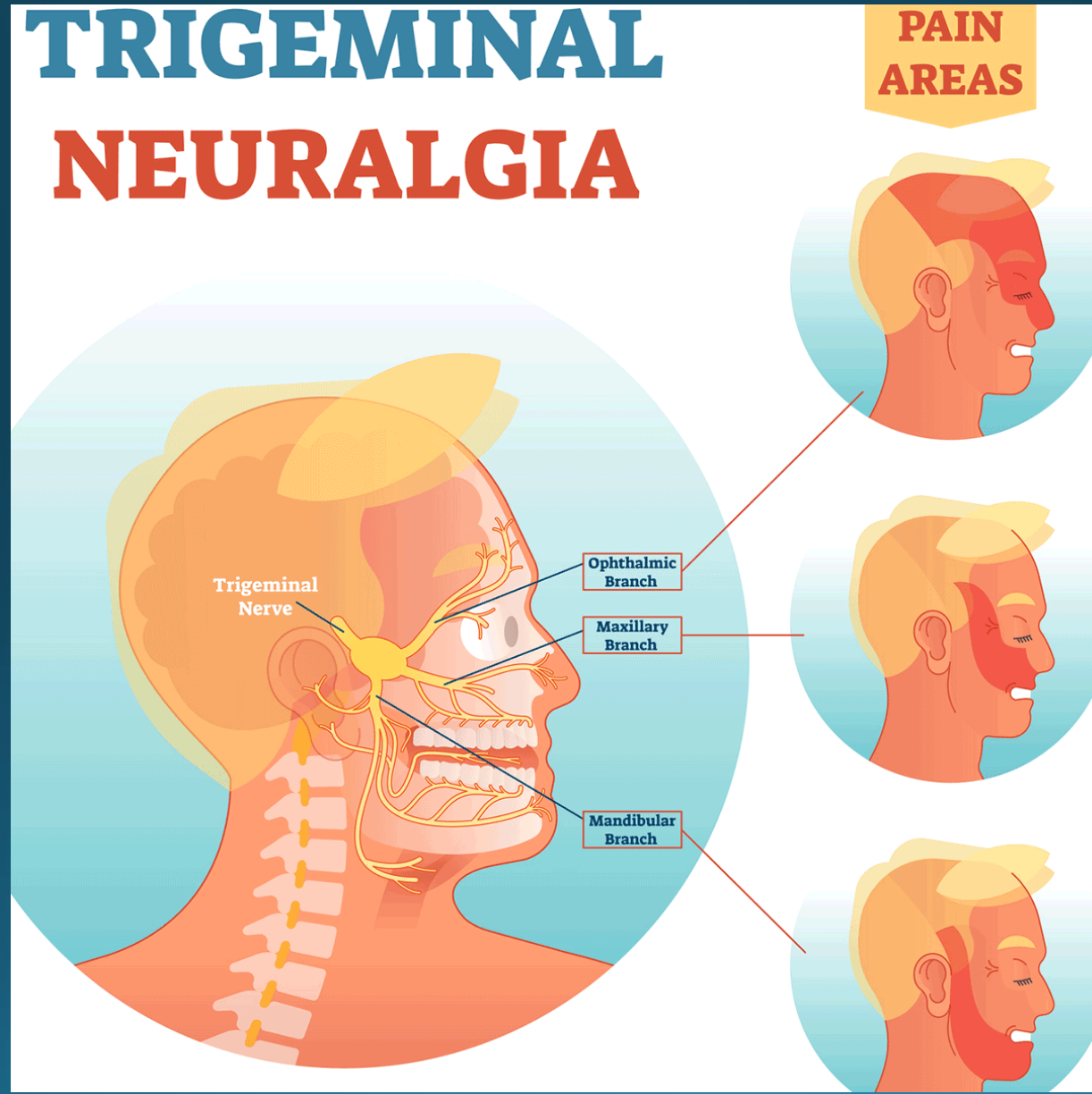


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TRIGEMINAL/GASSERIAN GANGLION BLOCK

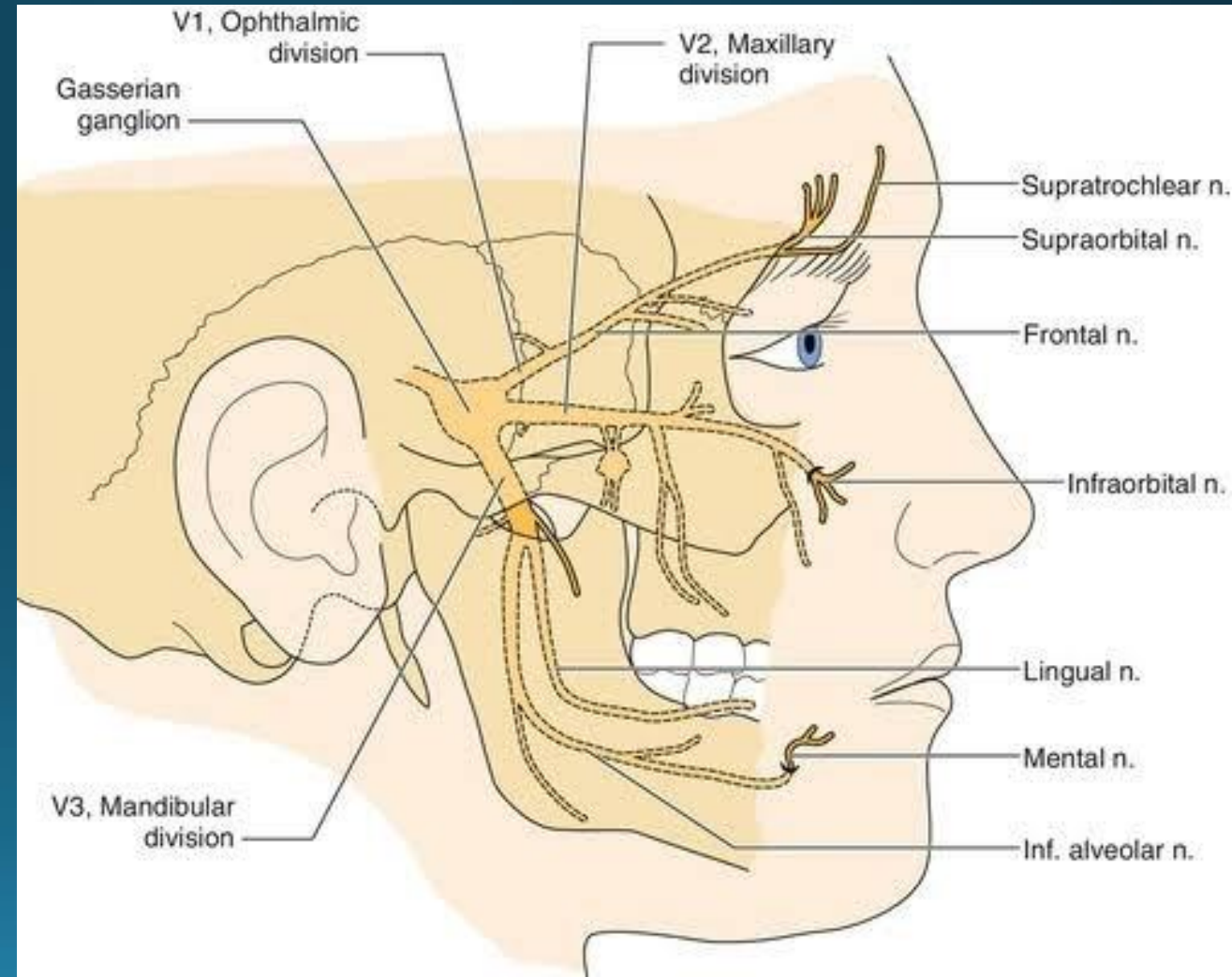
TRIGEMINAL NEURALGIA

Severe electric shock like pain typically involving one side of face



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



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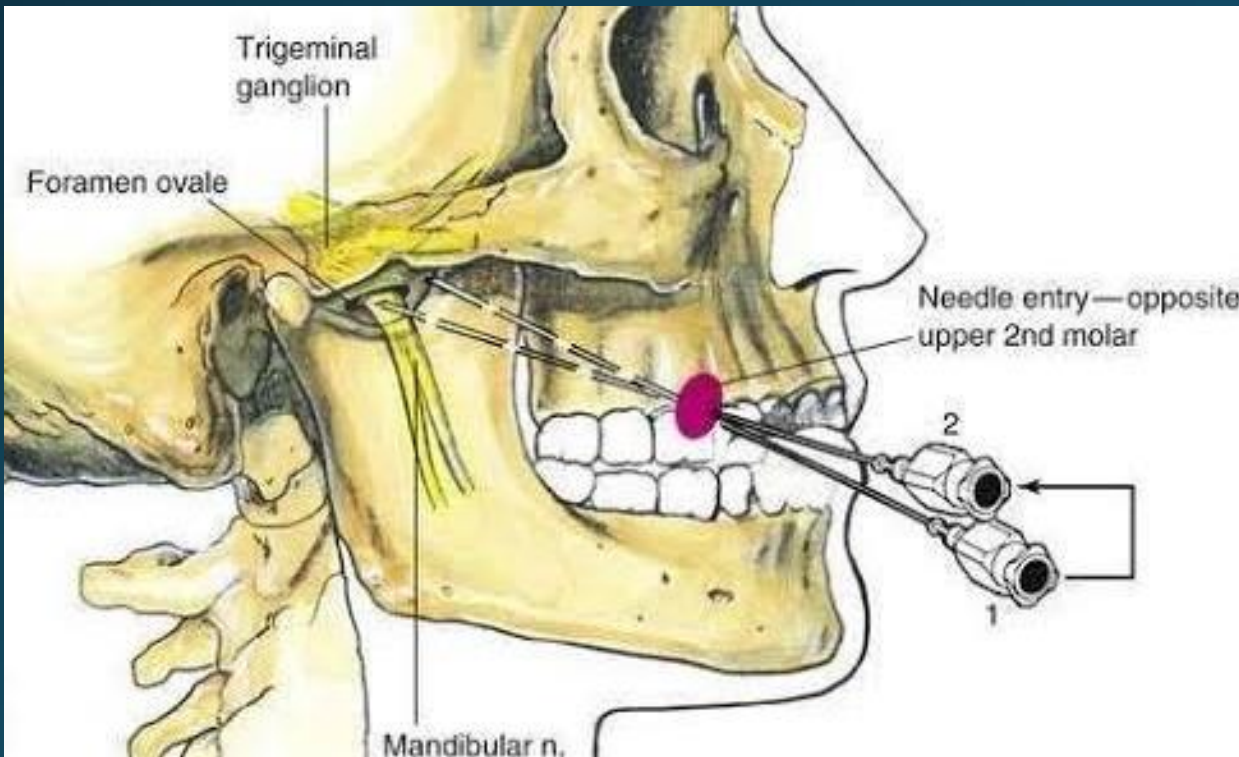
TRIGEMINAL GANGLION BLOCK:

TECHNIQUE:

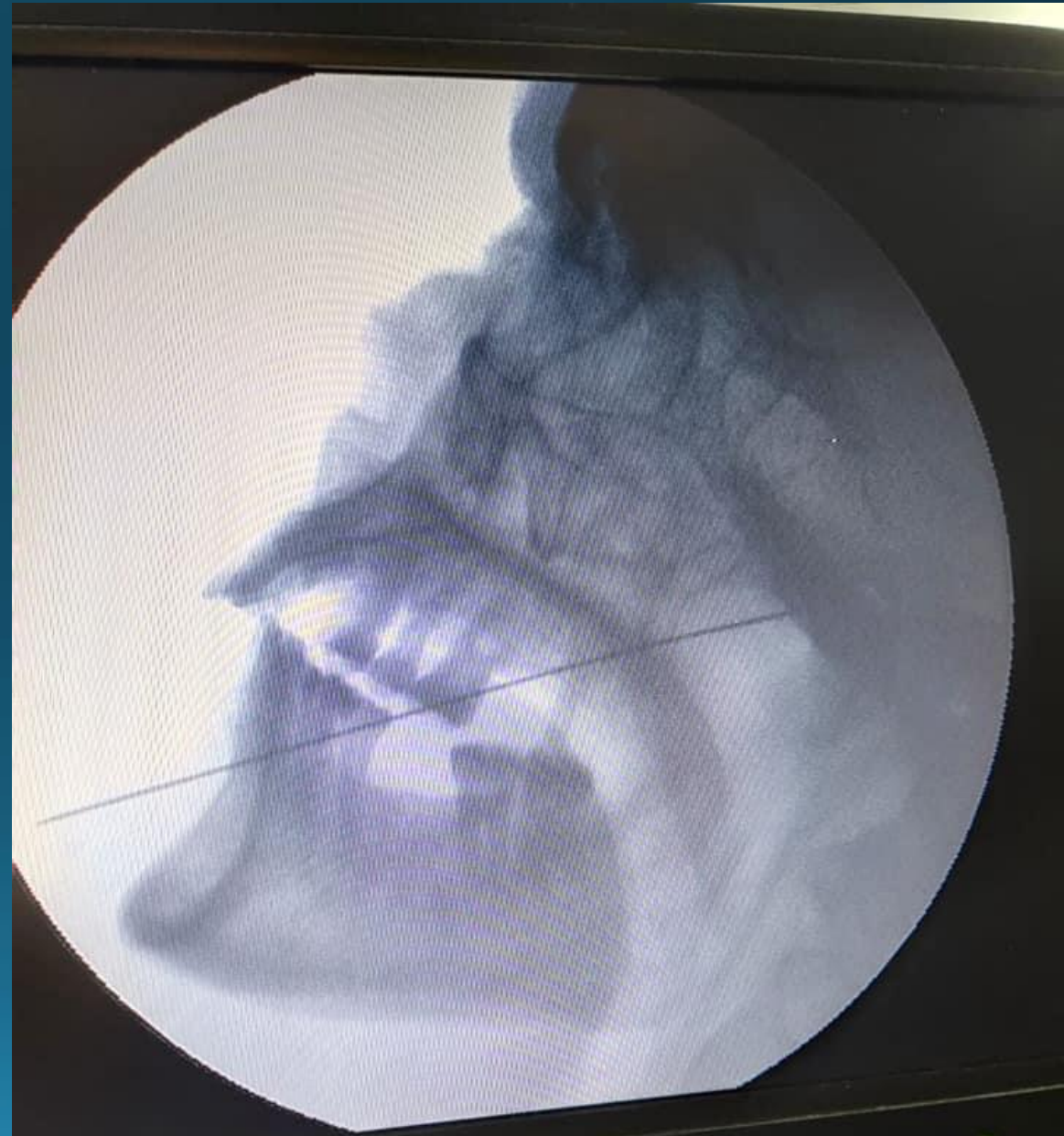
DRUGS ADMINISTERED:

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 BLOCK

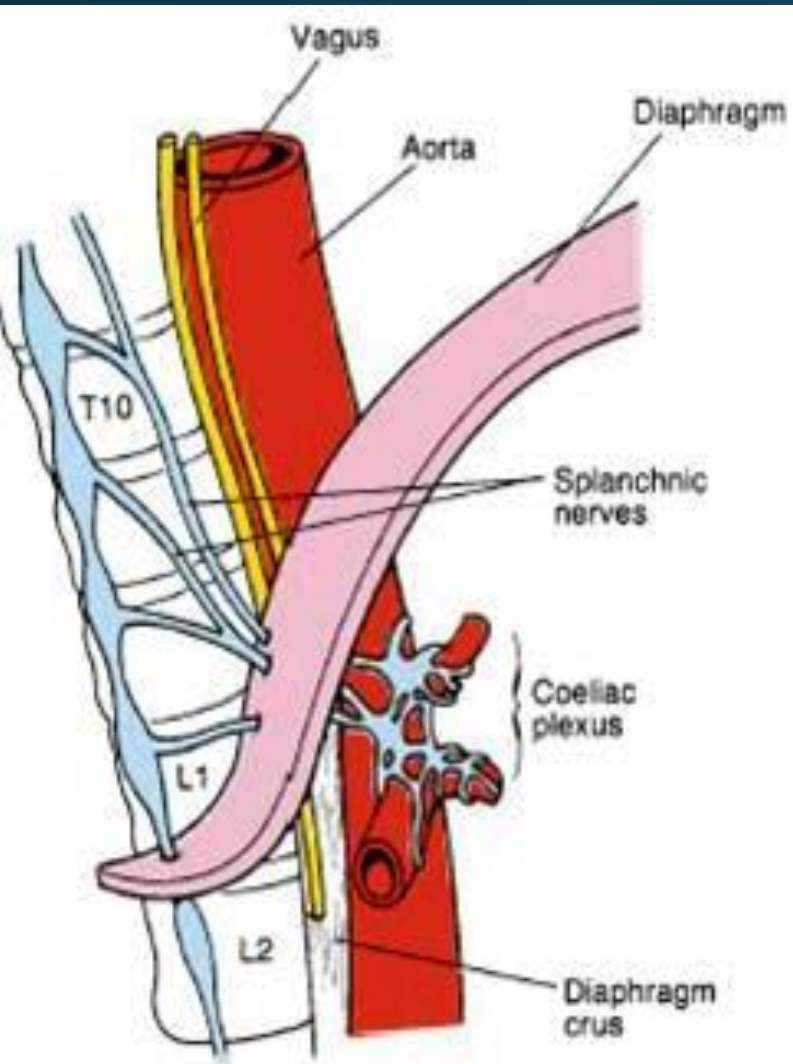
INDICATIONS

- 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

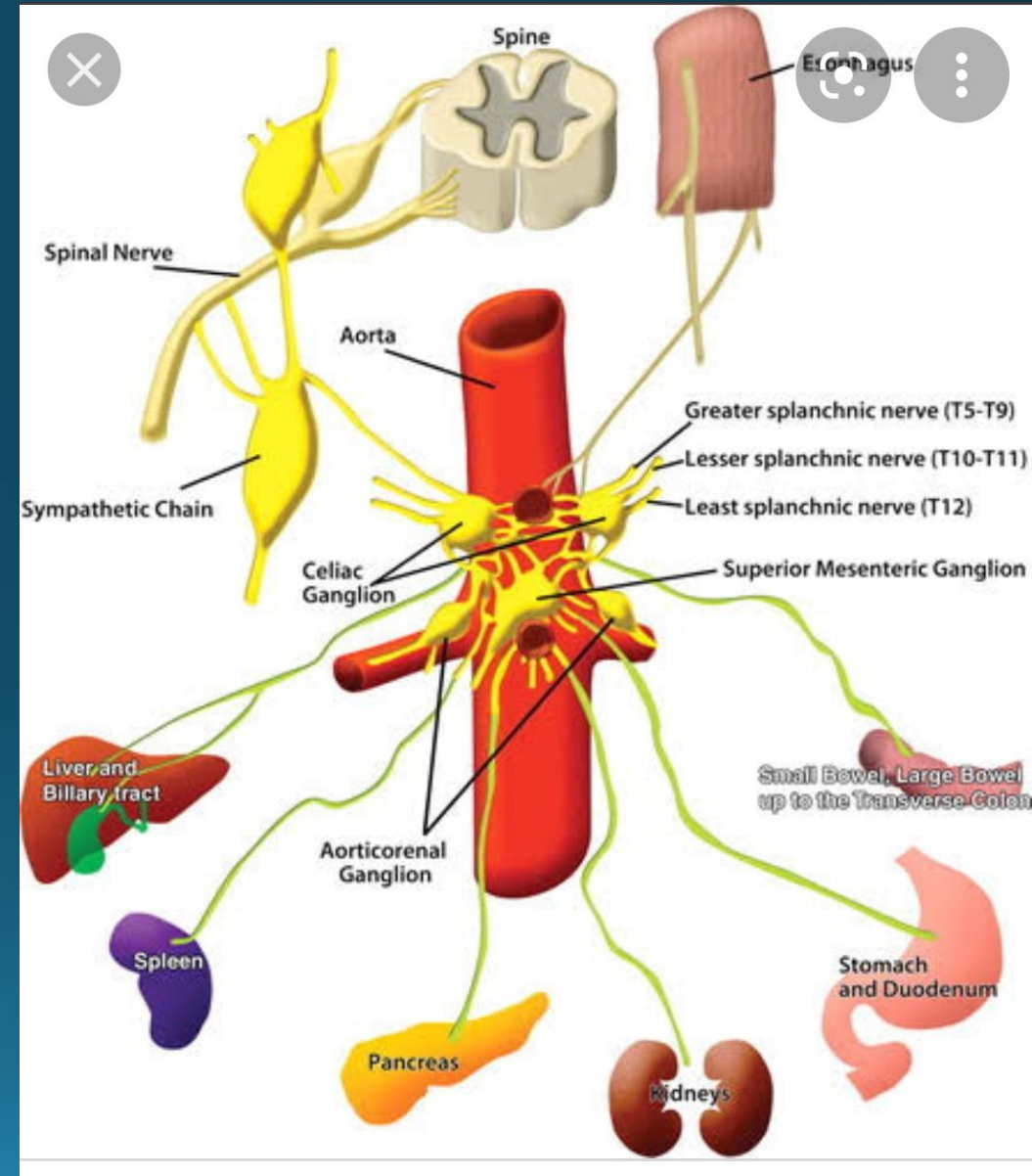
CONTRAINDICATION

- Bleeding and infection
- Large aortic aneurysm

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).**

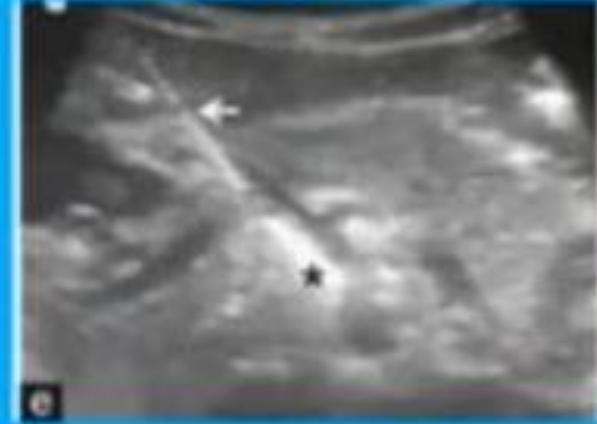


CPB TECHNIQUES

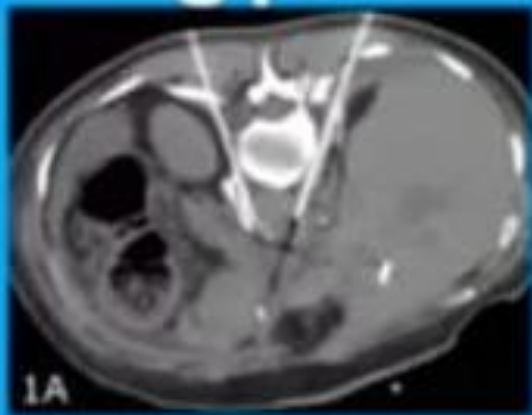
FLOUROSCOPY



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CT

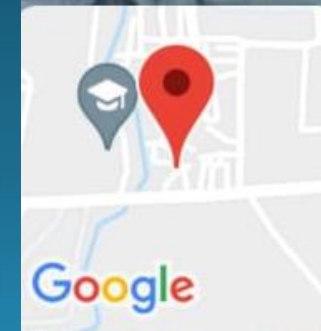


EUS



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.



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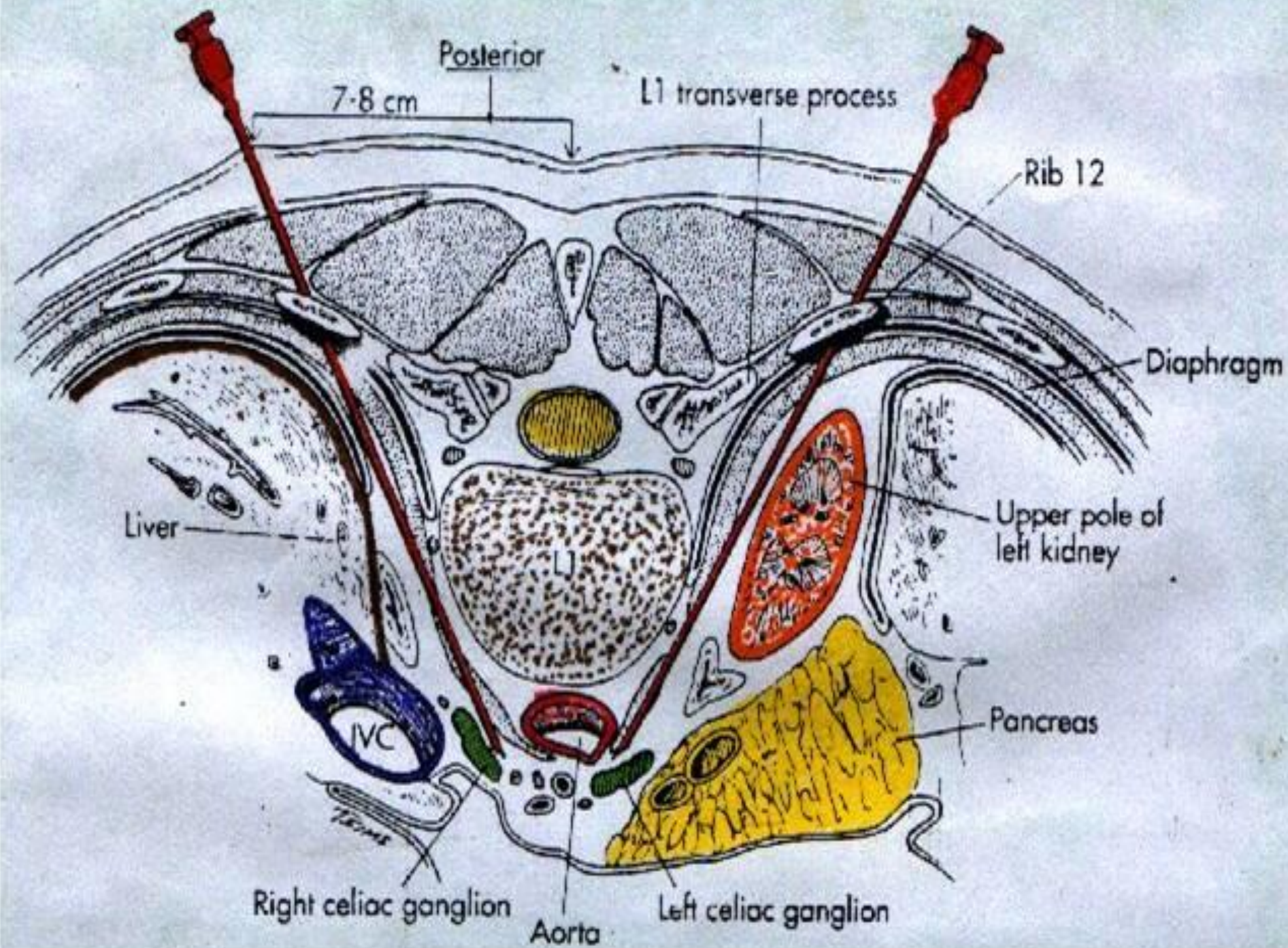
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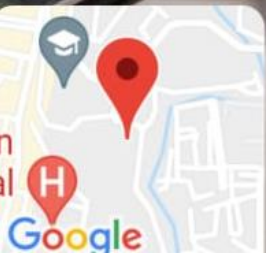
CASE REPORT 1:CA PANCREAS

- 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

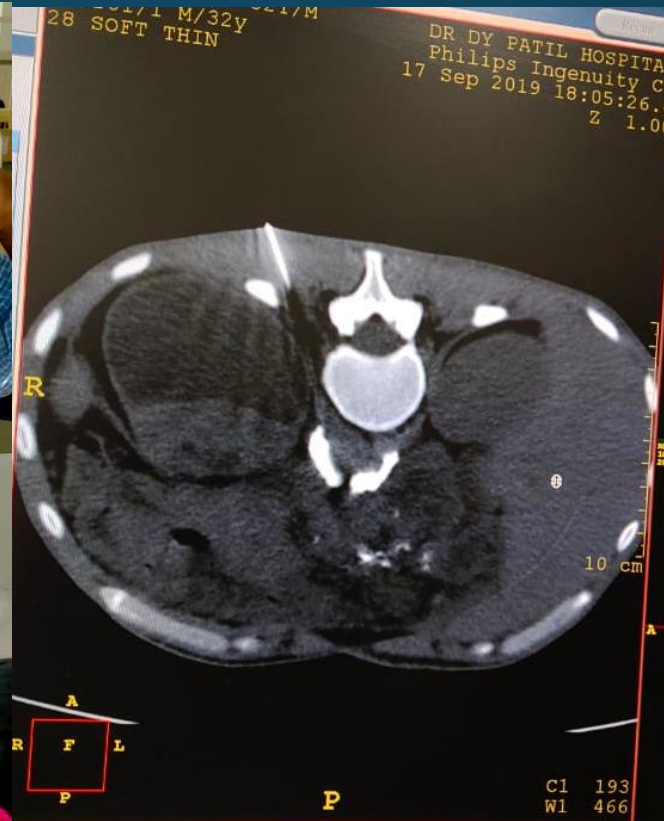


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CASE REPORT 2: CHRONIC PANCREATITIS

- 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

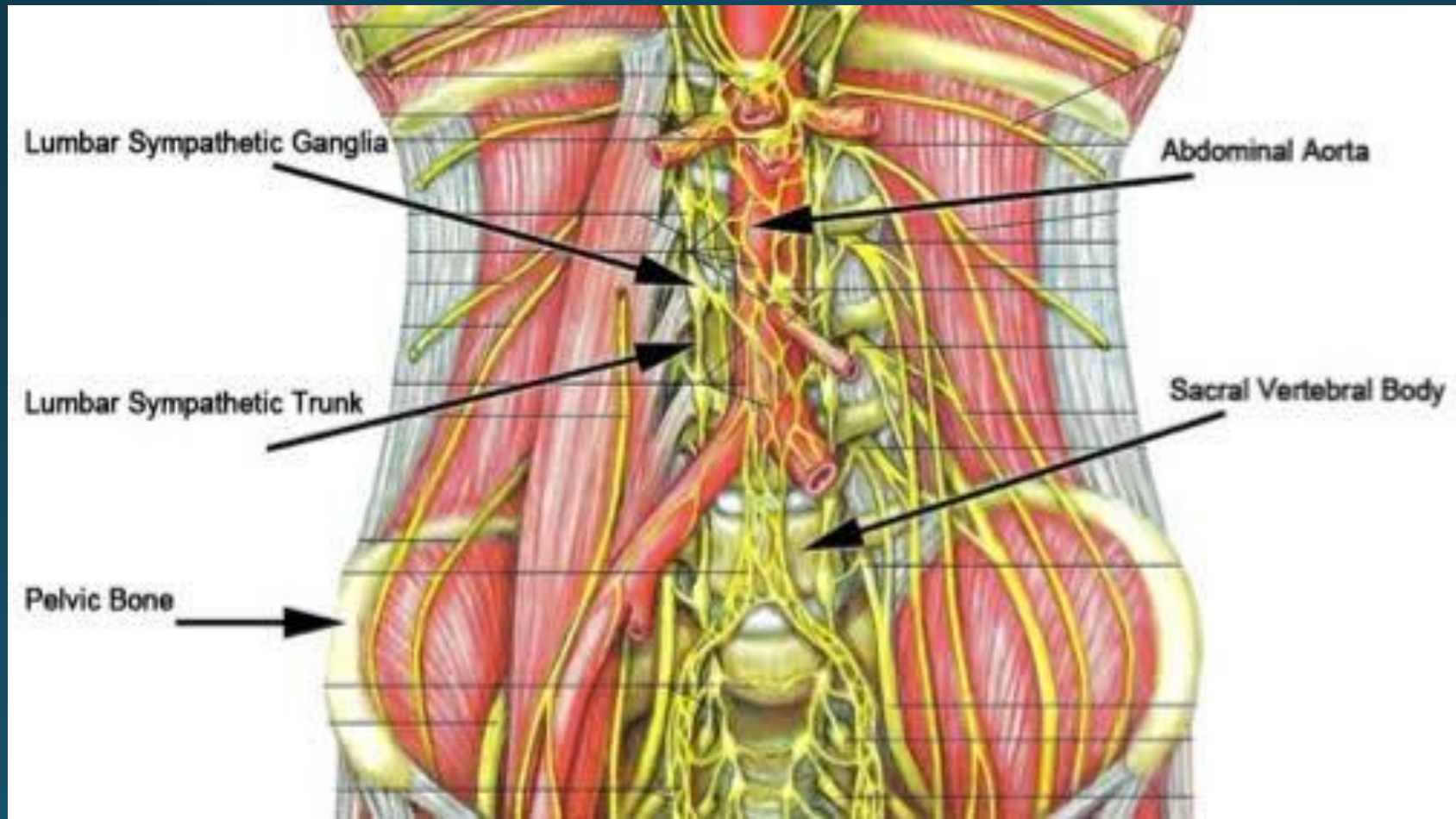
LUMBAR SYMPATHETIC BLOCK

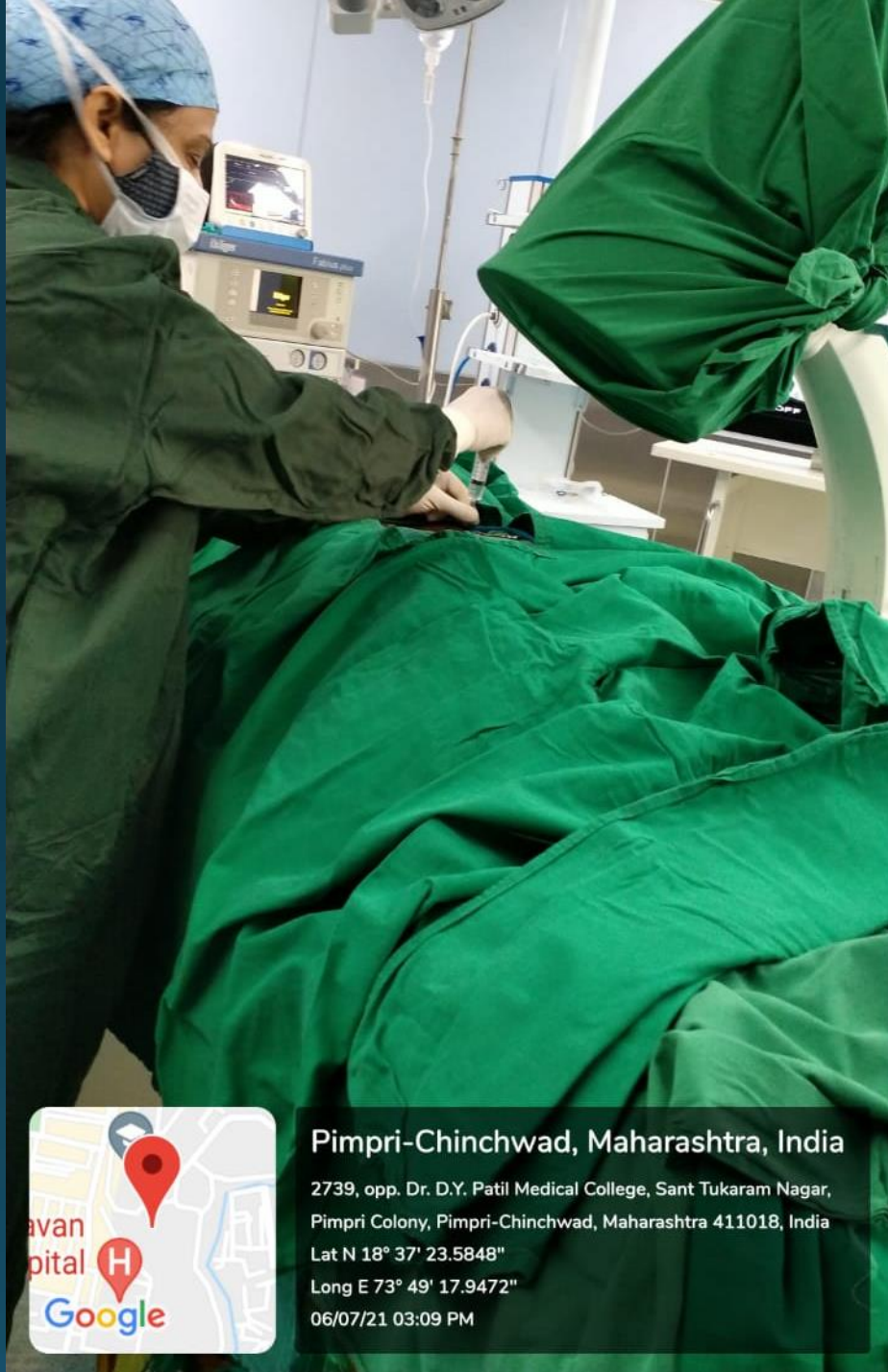
INDICATIONS

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

LUMBAR SYMPATHETIC ANATOMY

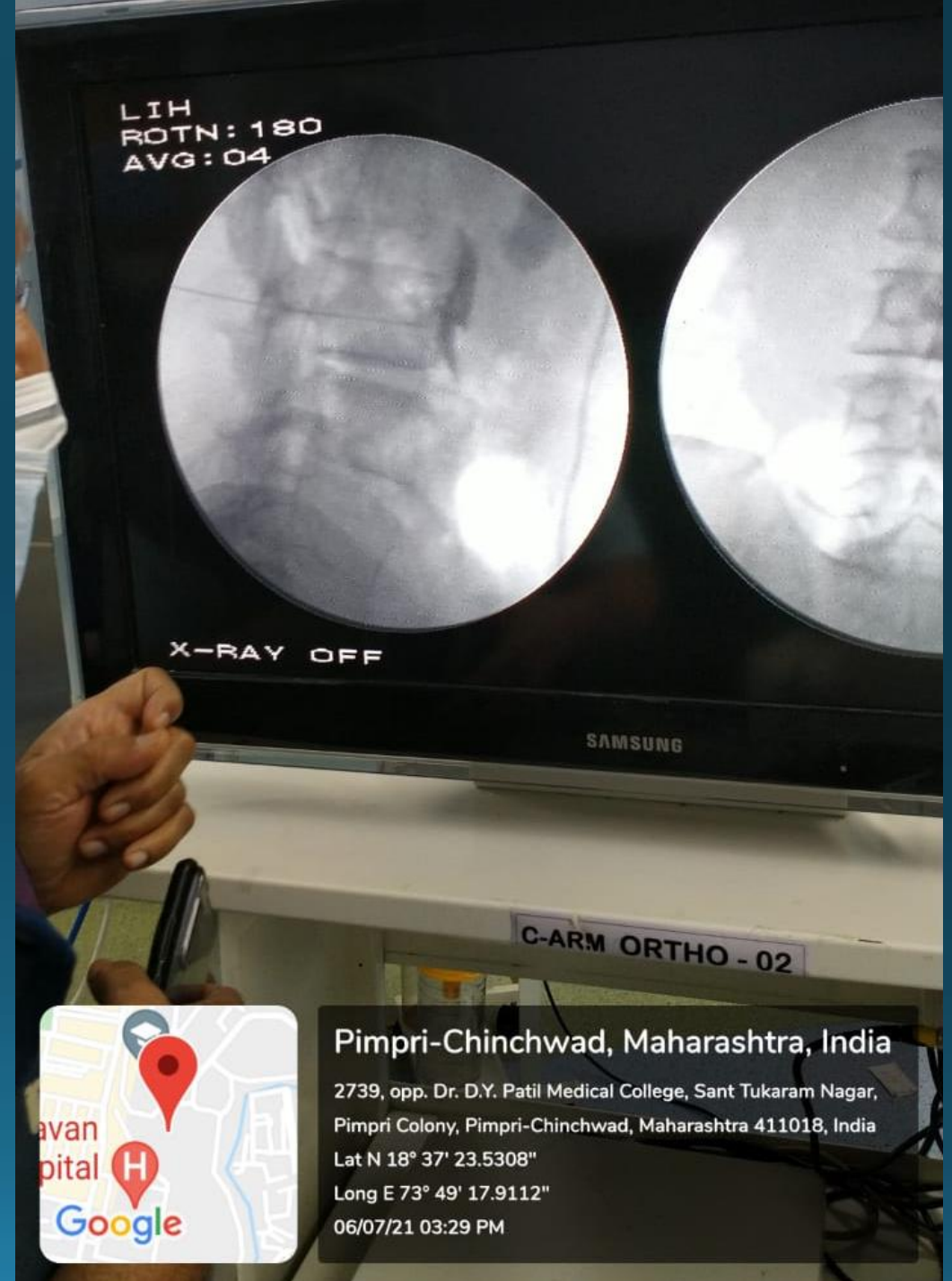
- Anterior divisions of L1, L2, L3 and the greater part of L4.
- The L1 root often receives a branch from T12.
- Situated most commonly in the posterior one third of the psoas major muscle, anterior to the transverse processes of the lumbar vertebrae.





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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

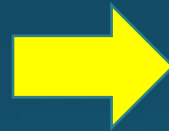




Prior to block

Drugs administered

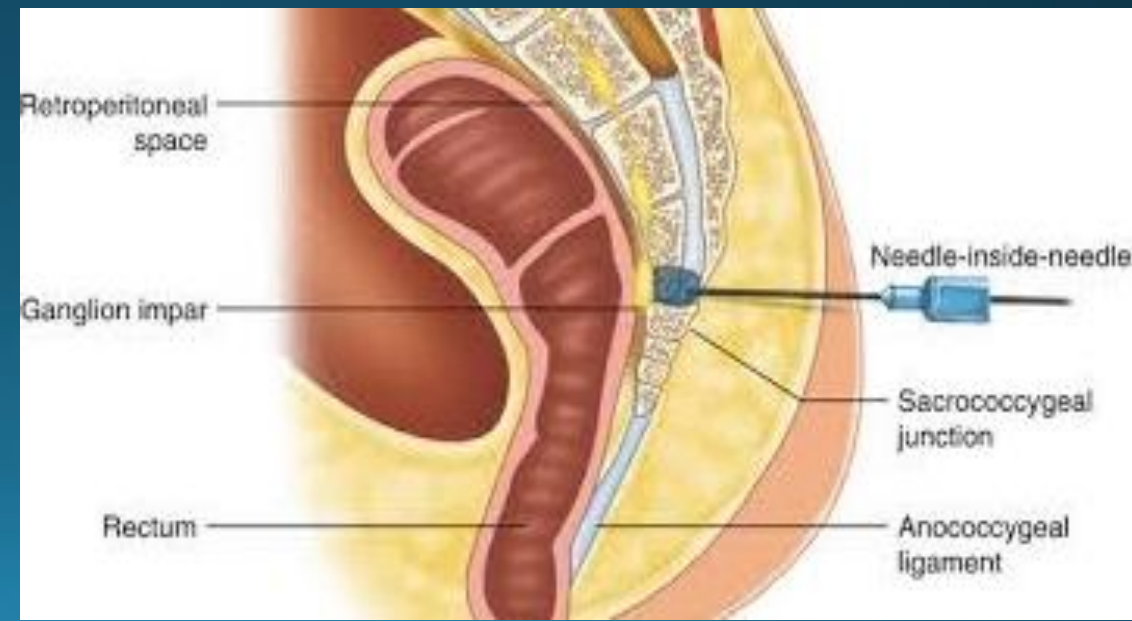
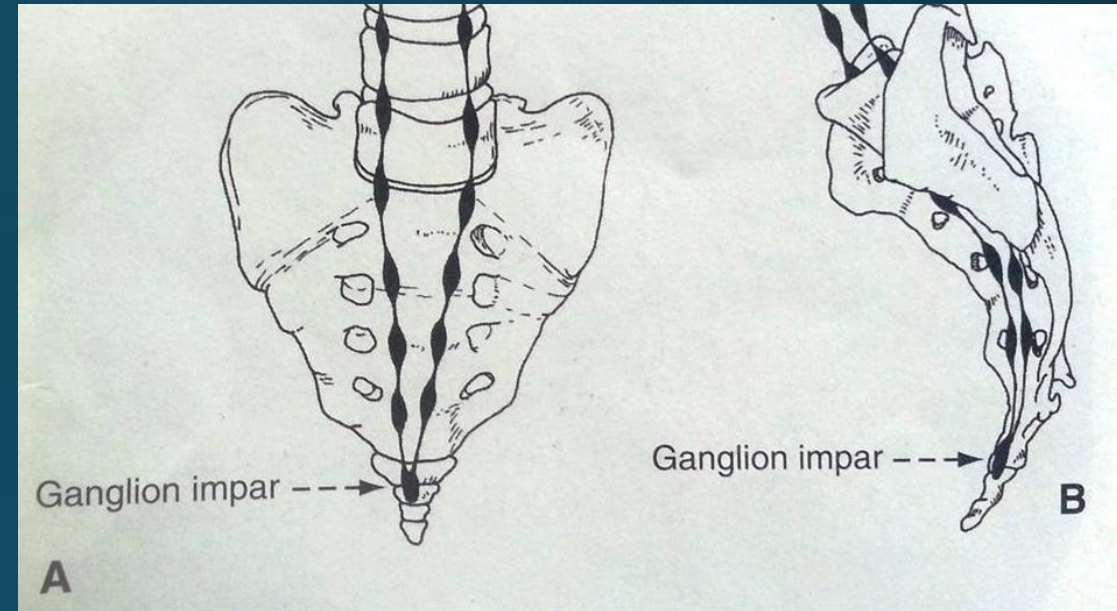
- 0.25% bupivacaine, 10ml
- 40 mcg clonidine
- 80 mg triamcinolone



One week post block

GANGLION IMPAR

- **COCCIGOYDYNIA:** 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.



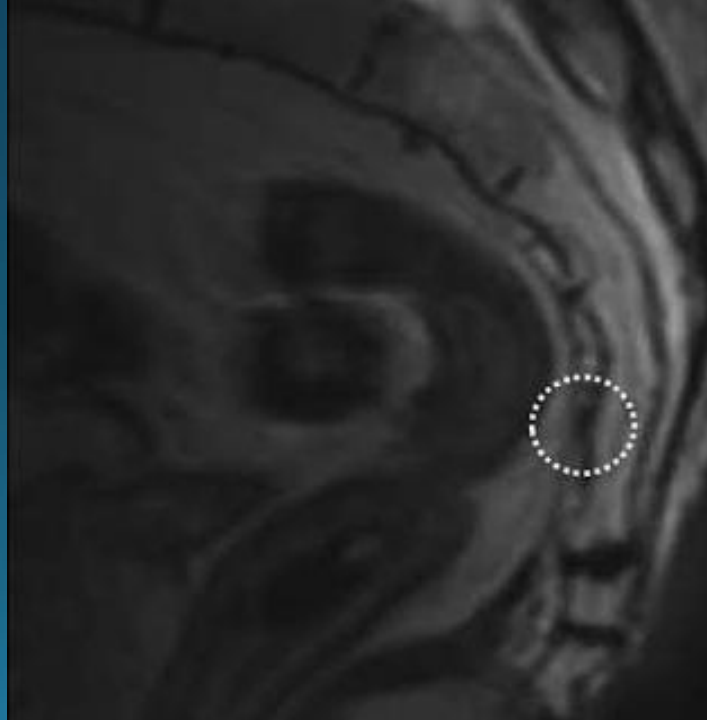
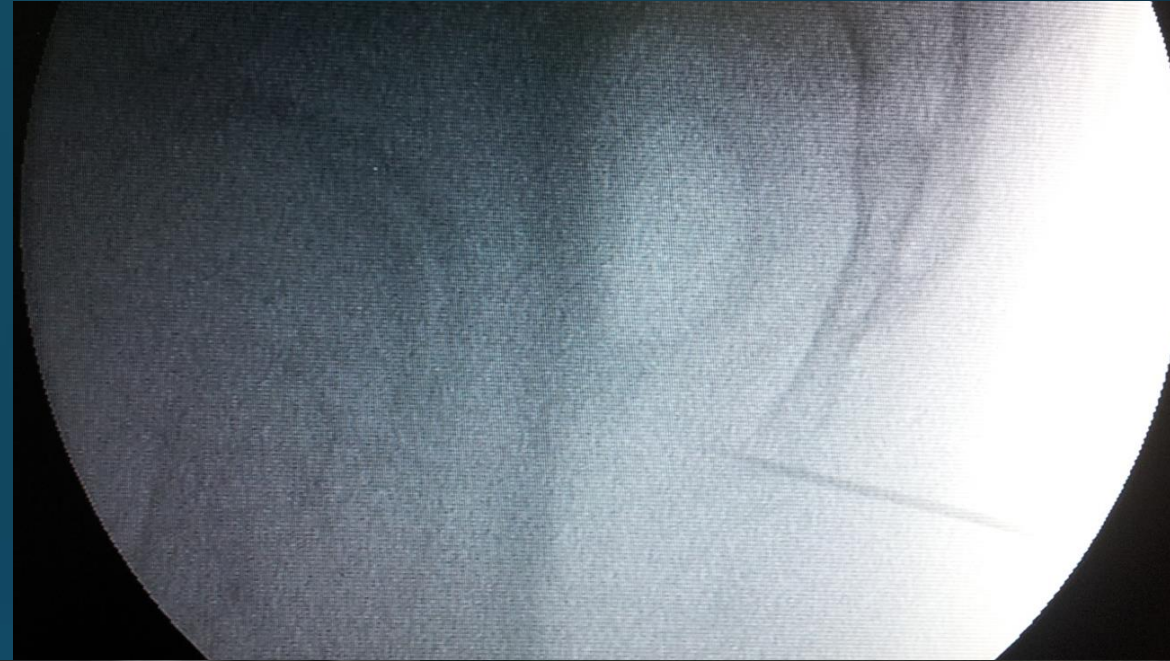
TECHNIQUE

Needle Position



Drugs administered

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



Needle with contrast

**WE KNOW YOUR PAIN
WE STRIVE TO RELIEVE YOUR PAIN.**



PAIN