



Welcome

Please remember

- Mute upon entry and stay muted unless you are called upon to share.
- Please text any questions into the Chat Box.
- The sessions will be recorded for future viewing.



Winter Conference March 12th, 2026

Hey Anesthesia! How's It Going Up There?

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Disclosure

Goals & Objectives

Through guided discussion and clinical case reviews, participants will acquire general knowledge of Obstetric Anesthesiology

Upon completion of this activity, participants will be able to...

- Summarize the various techniques of neuraxial anesthesia in obstetrics care
- Review contraindications to neuraxial anesthesia interventions
- Develop a familiarity of obstetric anesthesiology to effectively engage in collaborative clinical decision- making conversations

OB Anesthesiology Alphabet Soup

Neuraxial Analgesia

- EPID v CSE v DPE
- Early EPID
- NO- GO

Cesarean Delivery

- CSE v SPI v EPID
- GETA
- “STAT”

Anesthesia Emergencies

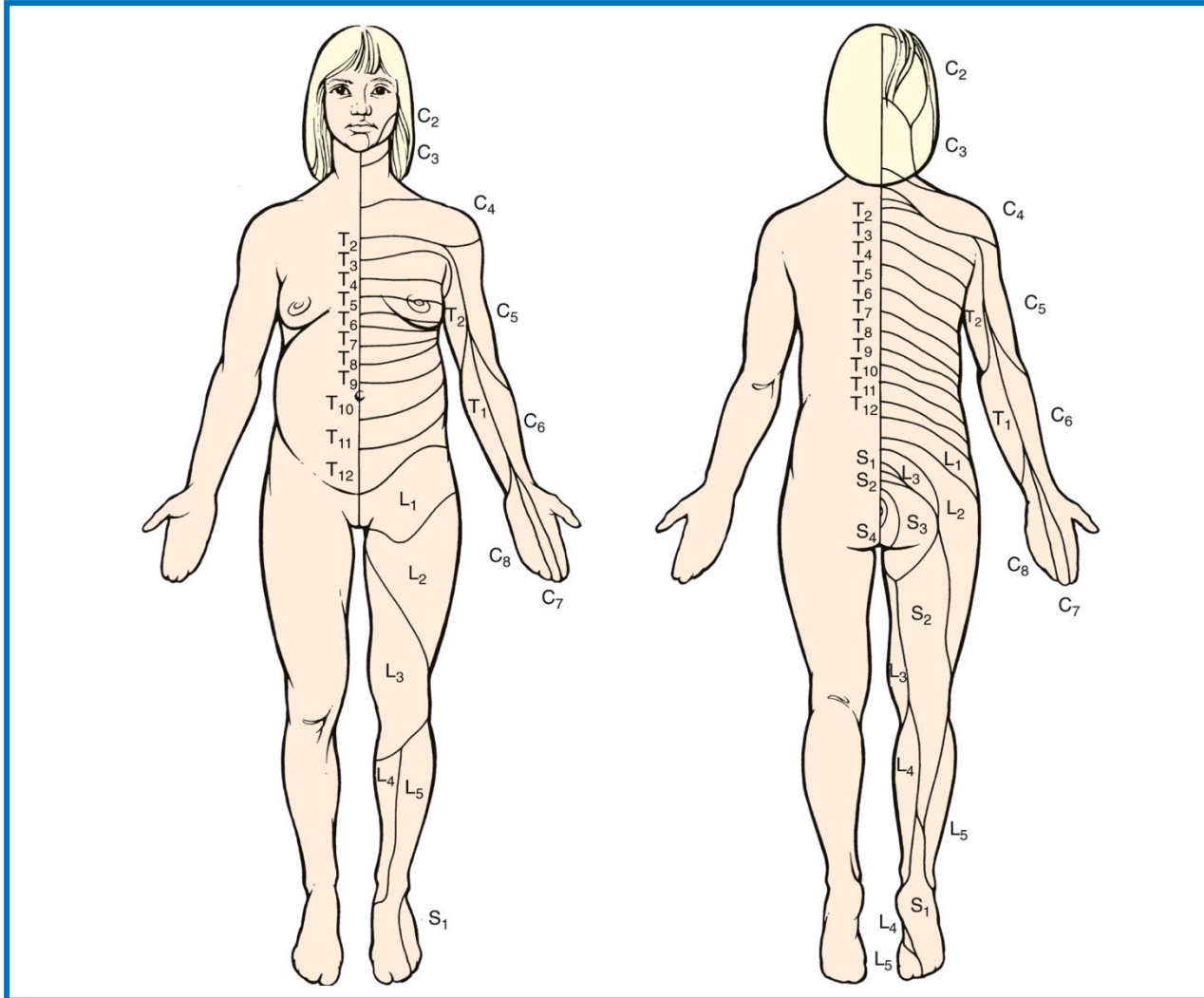
- LAST
- High SPINAL
- Airway
- PPH



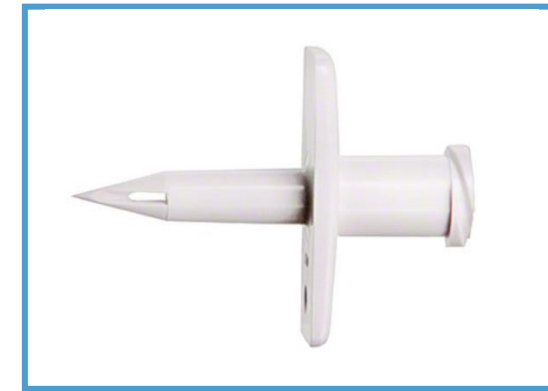


Anatomy & OB Anesthesia

Evaluating Block Level



www.food.com/recipe/ice-cubes-524197

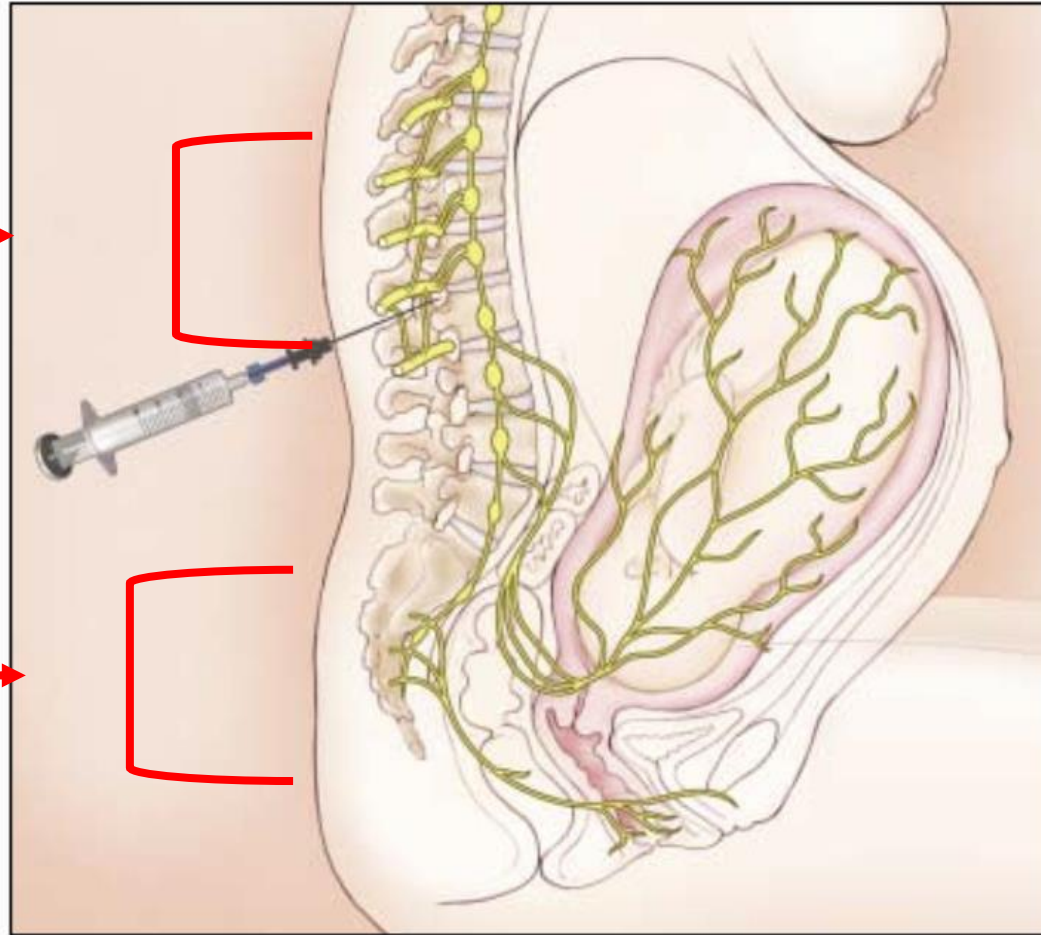


www.ciamedical.com/b-braun-412012-case-minispine-iv-additive-dispense-pin-50

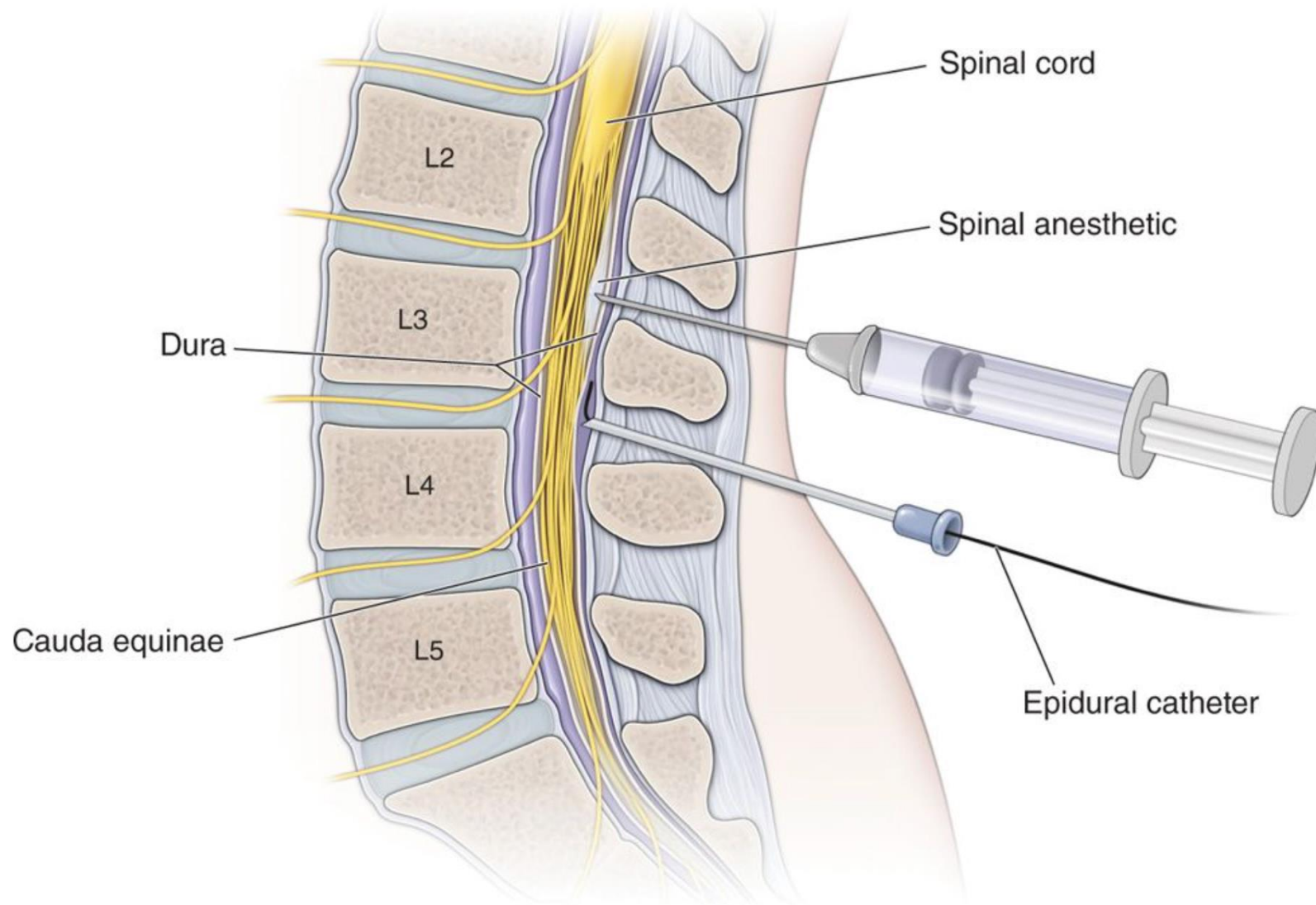
Labor Analgesia

First Stage
T10 – L1

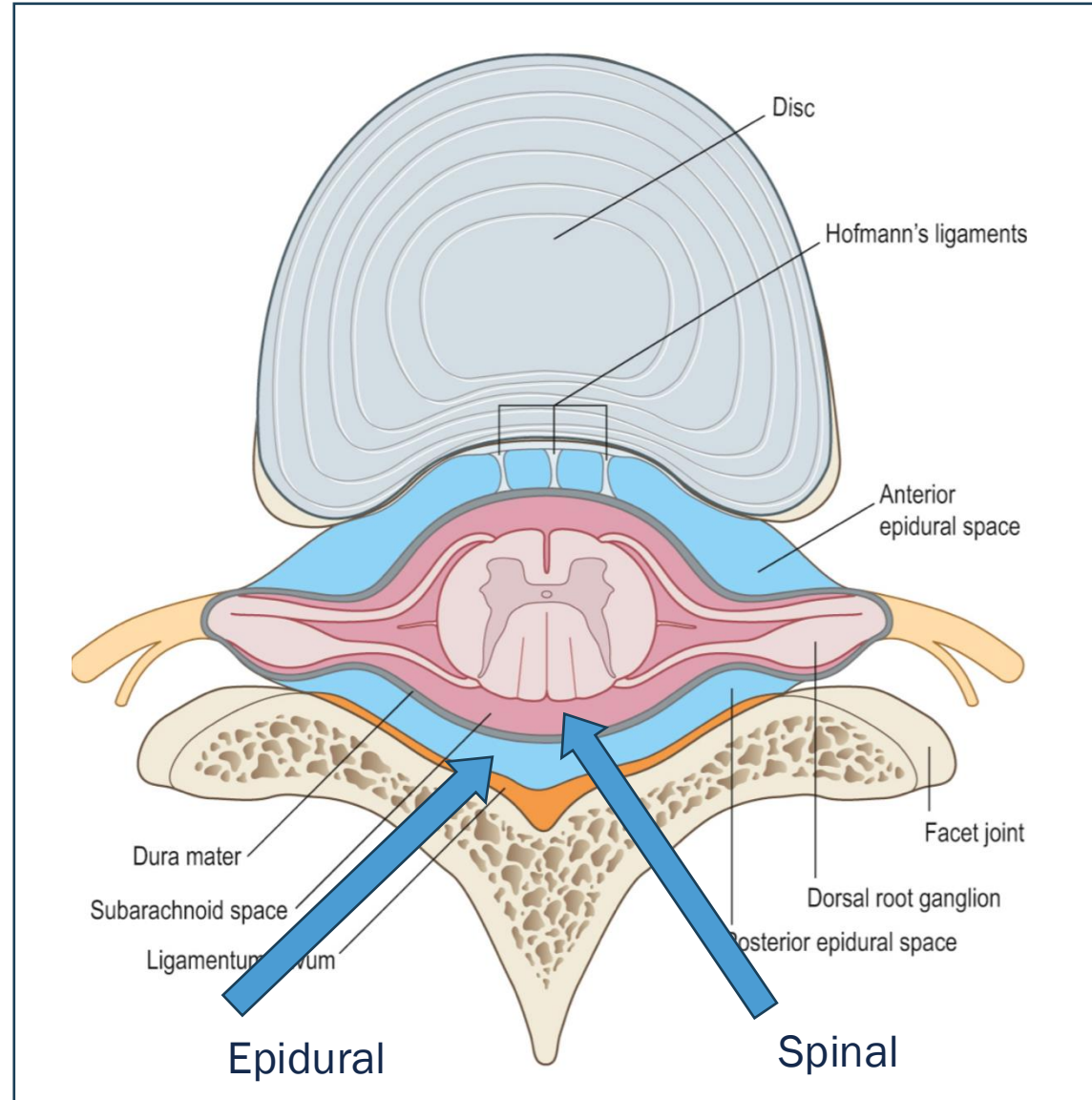
Second stage
+ S1 – S4



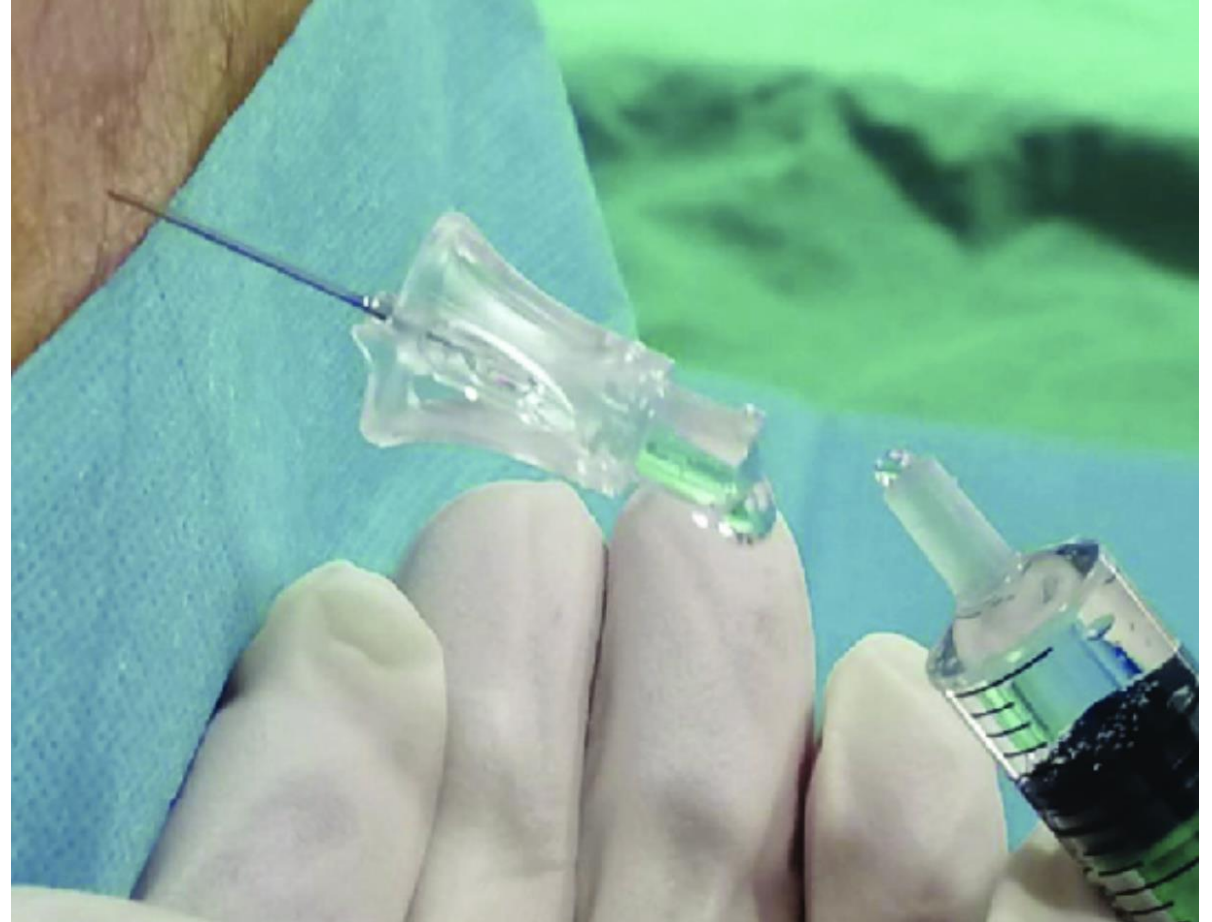
Epidural vs. Spinal



Epidural vs. Spinal



Epidural vs. Spinal



Epidural vs Spinal

Epidural

- Slow-onset
- Long duration (*infinite*)
- Continuous catheter
- Titrate to effect
- High volume medication
- “Blind”
- Higher failure rate

Spinal

- Quick onset
- One shot, one dose
- Finite duration (90-120 min)
- *Get what you get*
- Low volume medication
- “Visual” procedure
- Lower failure rate

Epidural and Spinal

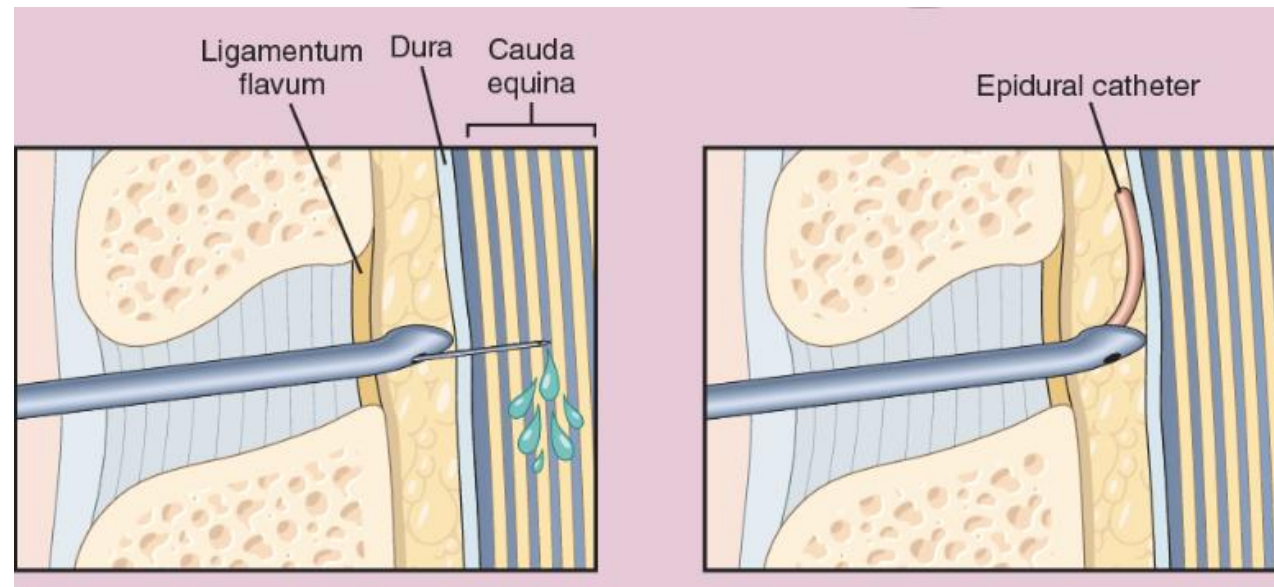
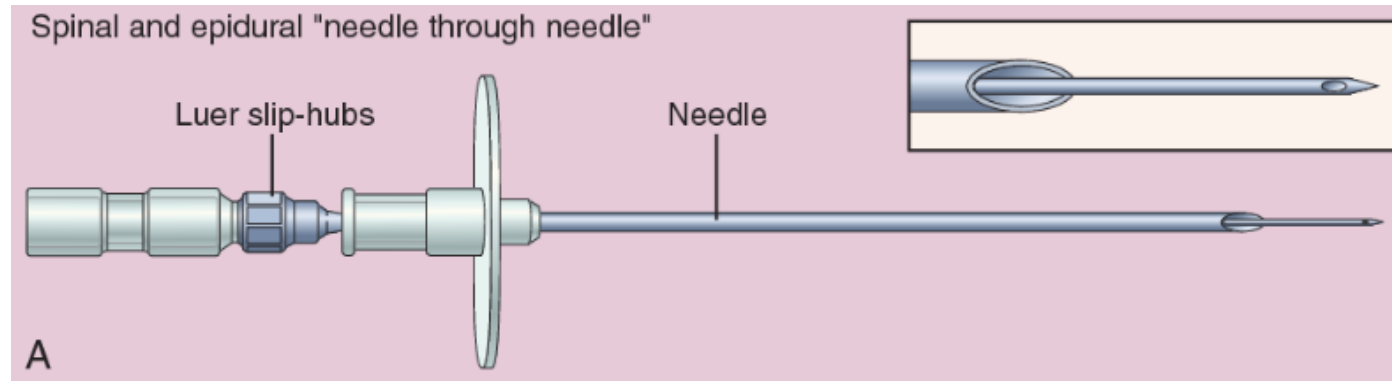
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Combined Spinal Epidural (CSE)



CSE: Labor Analgesia

Advantages

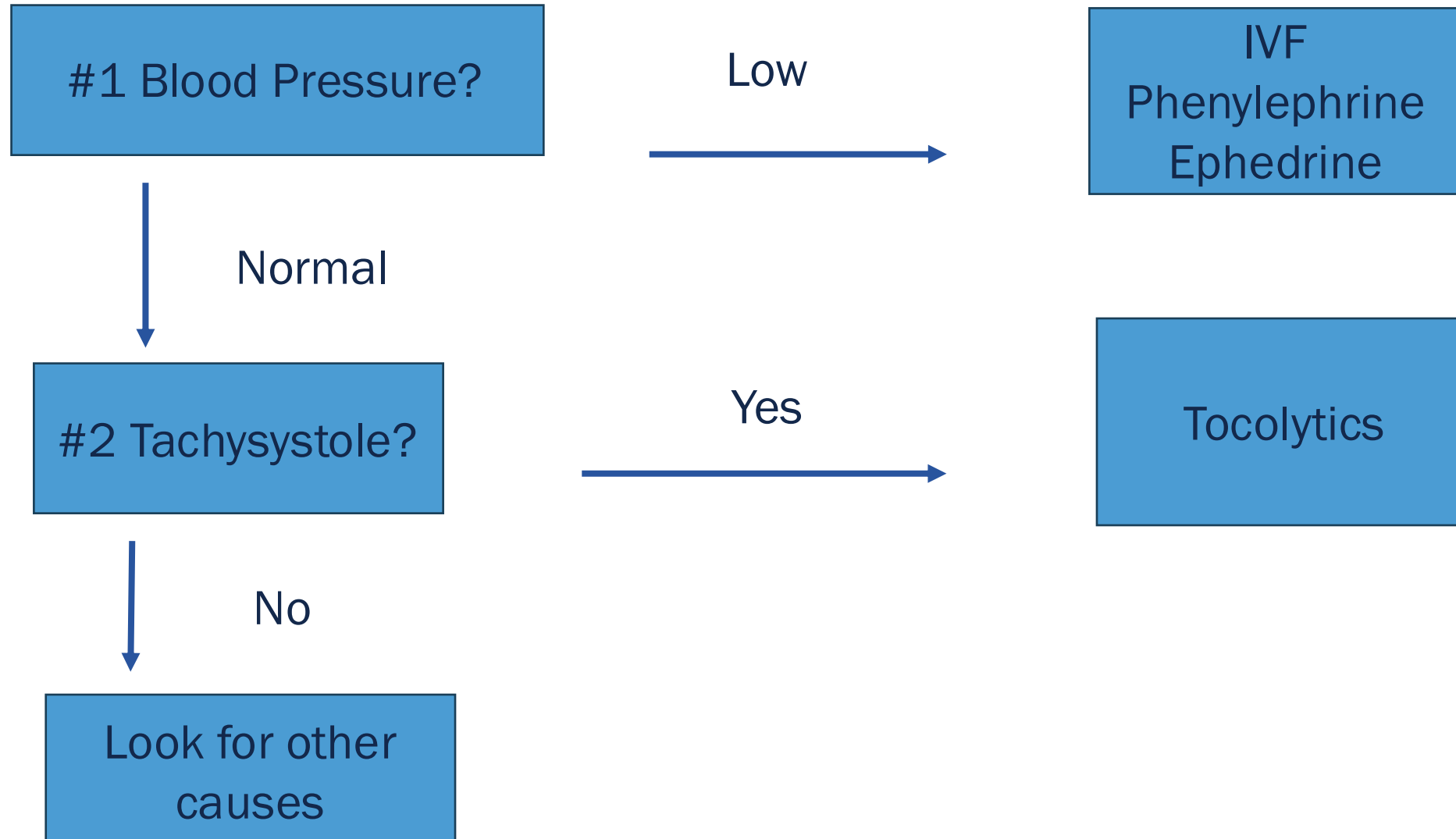
- Fast onset
- Long duration
- Improved analgesic spread
- Sacral coverage
- ↓ Failure rate catheter
- ↑ Maternal satisfaction

Disadvantages

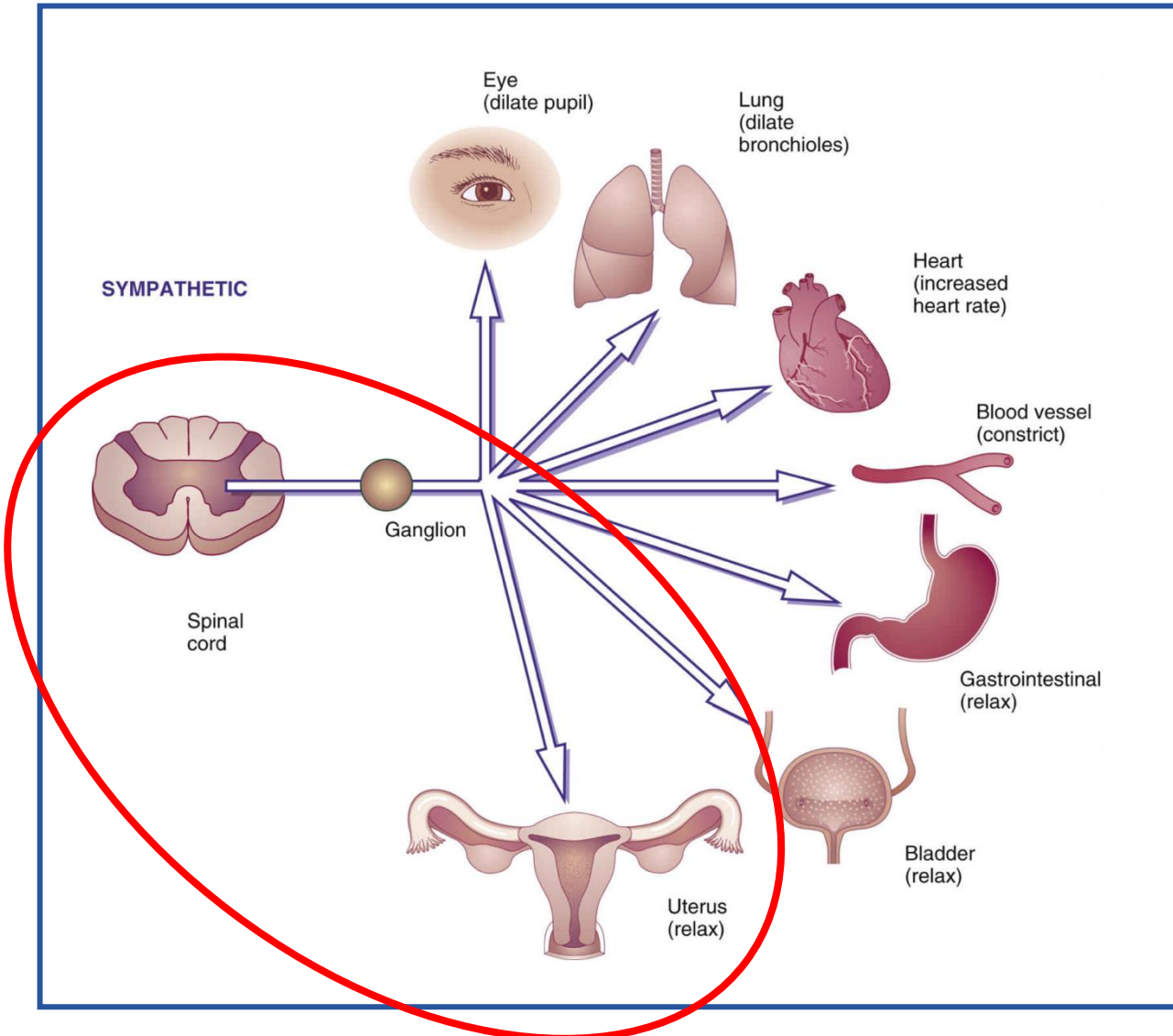
- ↑ Pruritis
- Hypotension
- ↑ Uterine tone
- NRFHT (2-3x risk)



CSE → NRFHT... Now what?



CSE → Tachysystole



- Sympathectomy
- Oxytocin >> Epinephrine
- ↑ Uterine tone
- Rx w Tocolytics
 - Nitroglycerin
 - Terbutaline

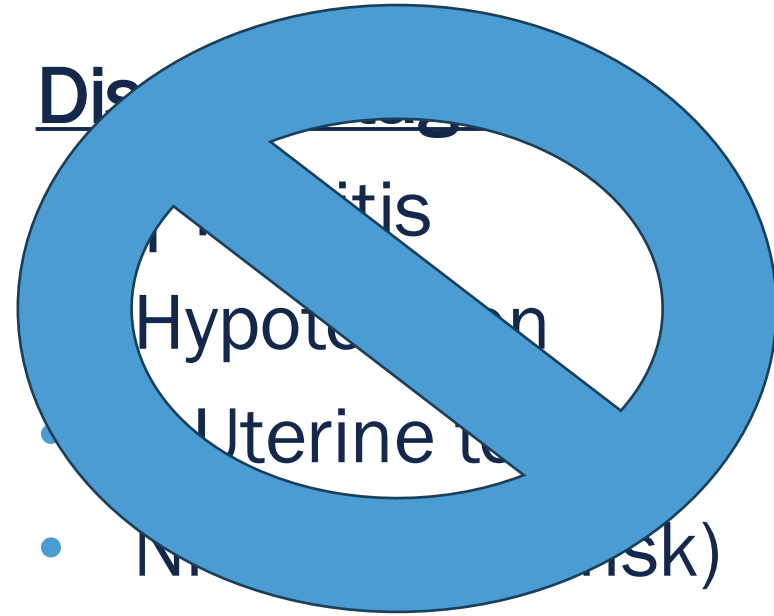
<https://basicmedicalkey.com/adrenergic-agonists-and-antagonists-3/>. Accessed 2/27/2026

CSE: Labor Analgesia

Advantages

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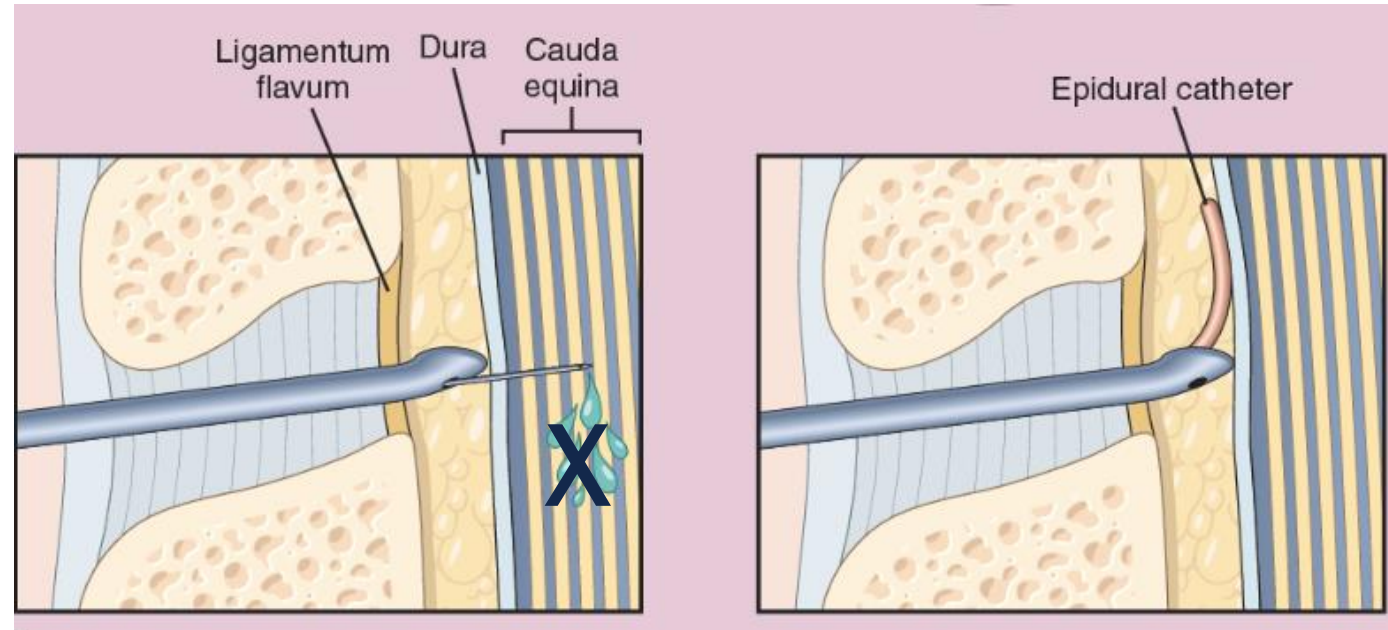
Disadvantages



DPE: Dural Puncture Epidural

Advantages

- Fast onset
- Long duration
- Improved analgesic spread
- Sacral coverage
- ↓ Failure rate catheter
- ↑ Maternal satisfaction





Early Labor Epidural

Early Labor Epidural → Avoid GETA

↑ Risk of operative and/or emergent interventions

- TOLAC
- Obese
- NRFHT
- Pre-E
- Multi-gestation
- High-risk airway
- Thrombocytopenia



NO - GO:

Contraindications

to

Neuraxial

Contraindications to Neuraxial Anesthesia

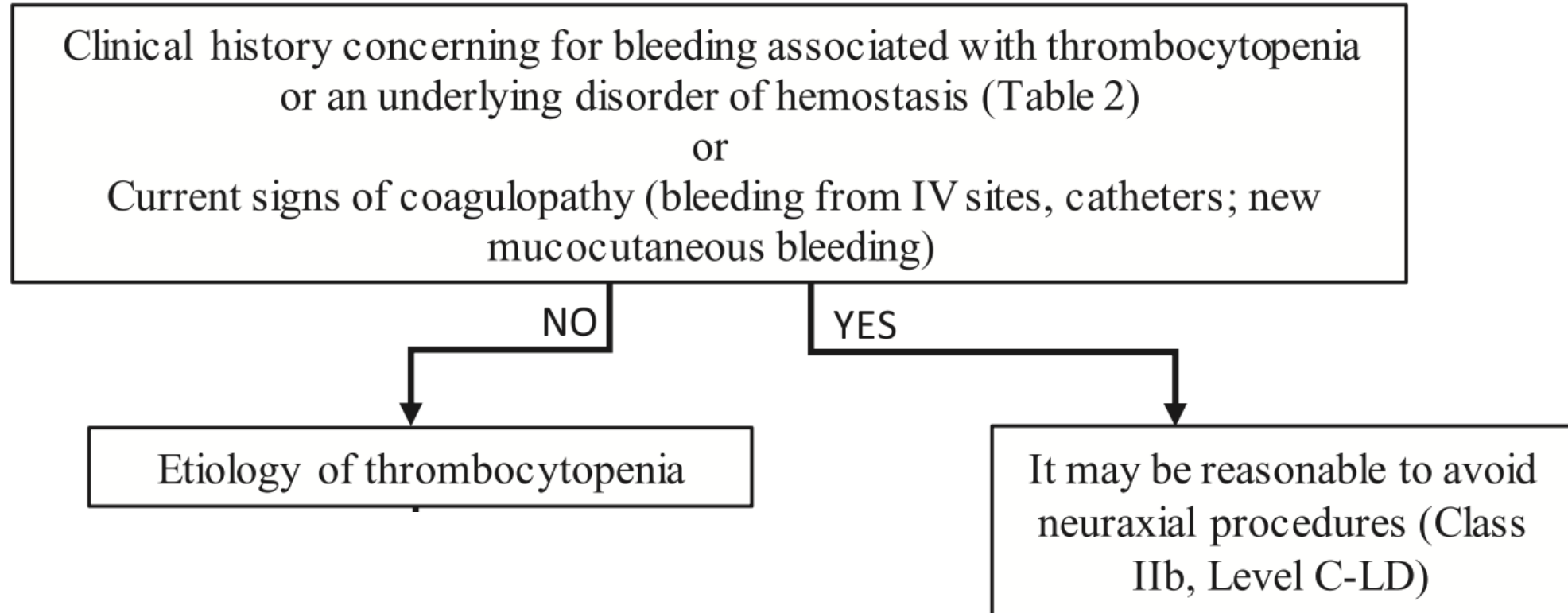
- Pt refusal
- Provider inexperienced/unavailable
- Inadequate resources for monitoring & resuscitation
- Infection @ site
- Hemodynamic instability
- Sepsis/IAI →
- Coagulopathy →
- Initiate antibiotics
- Thrombocytopenia → Magic #
- Anticoagulation
- DIC

The Society for Obstetric Anesthesia and Perinatology Interdisciplinary Consensus Statement on Neuraxial Procedures in Obstetric Patients With Thrombocytopenia

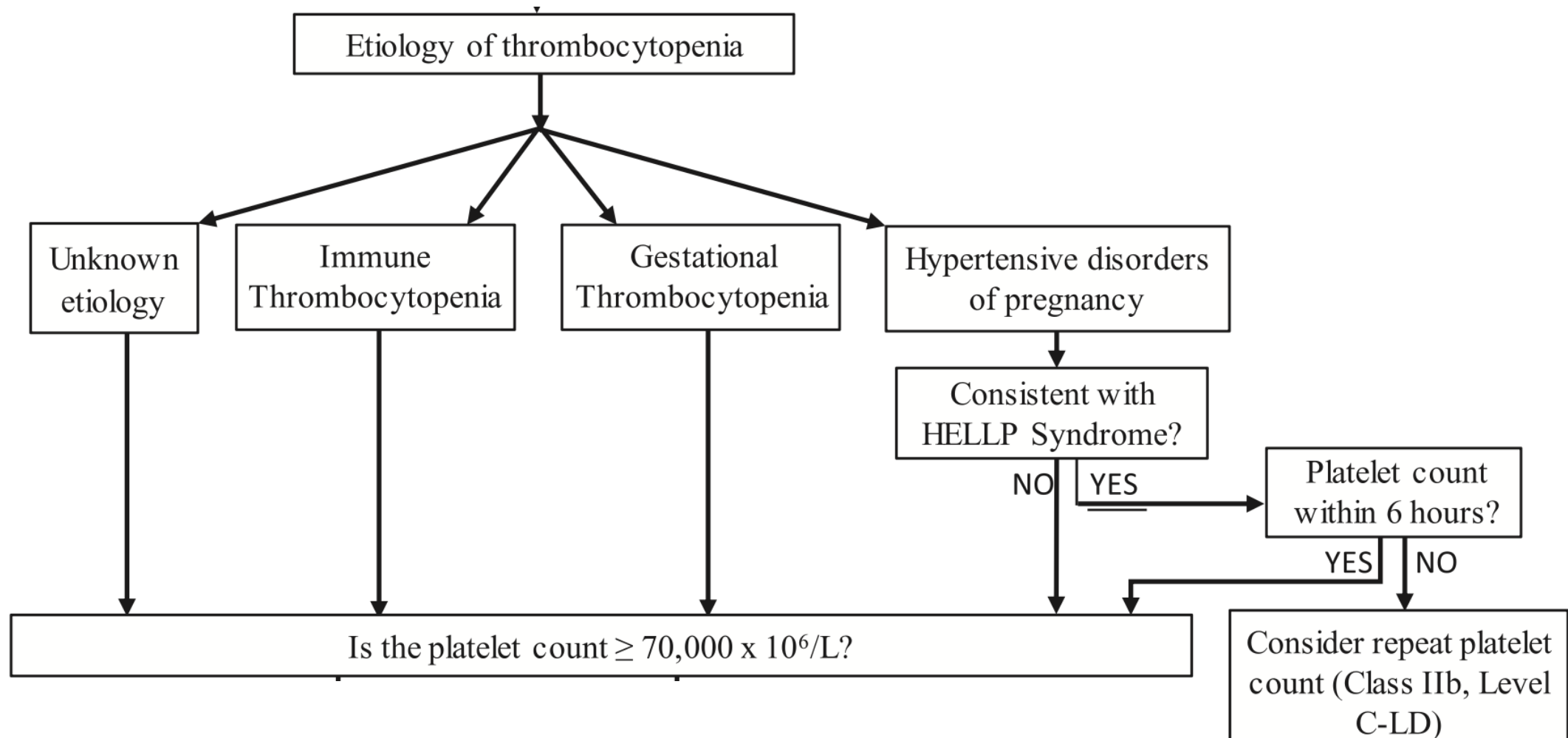
Melissa E. Bauer, DO,* Katherine Arendt, MD,† Yaakov Beilin, MD,‡ Terry Gernsheimer, MD,§
Juliana Perez Botero, MD,|| Andra H. James, MD,¶ Edward Yaghmour, MD,#
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Mark MacEachern, MLIS,§§ Hannah Madden, BS,‡‡ Anita Rajasekhar, MD, MS,|||
Scott Segal, MD,¶¶ Christopher Wu, MD,## Jason P. Cooper, MD, PhD,§ Ruth Landau, MD,***
and Lisa Leffert, MD‡‡

Magic number?

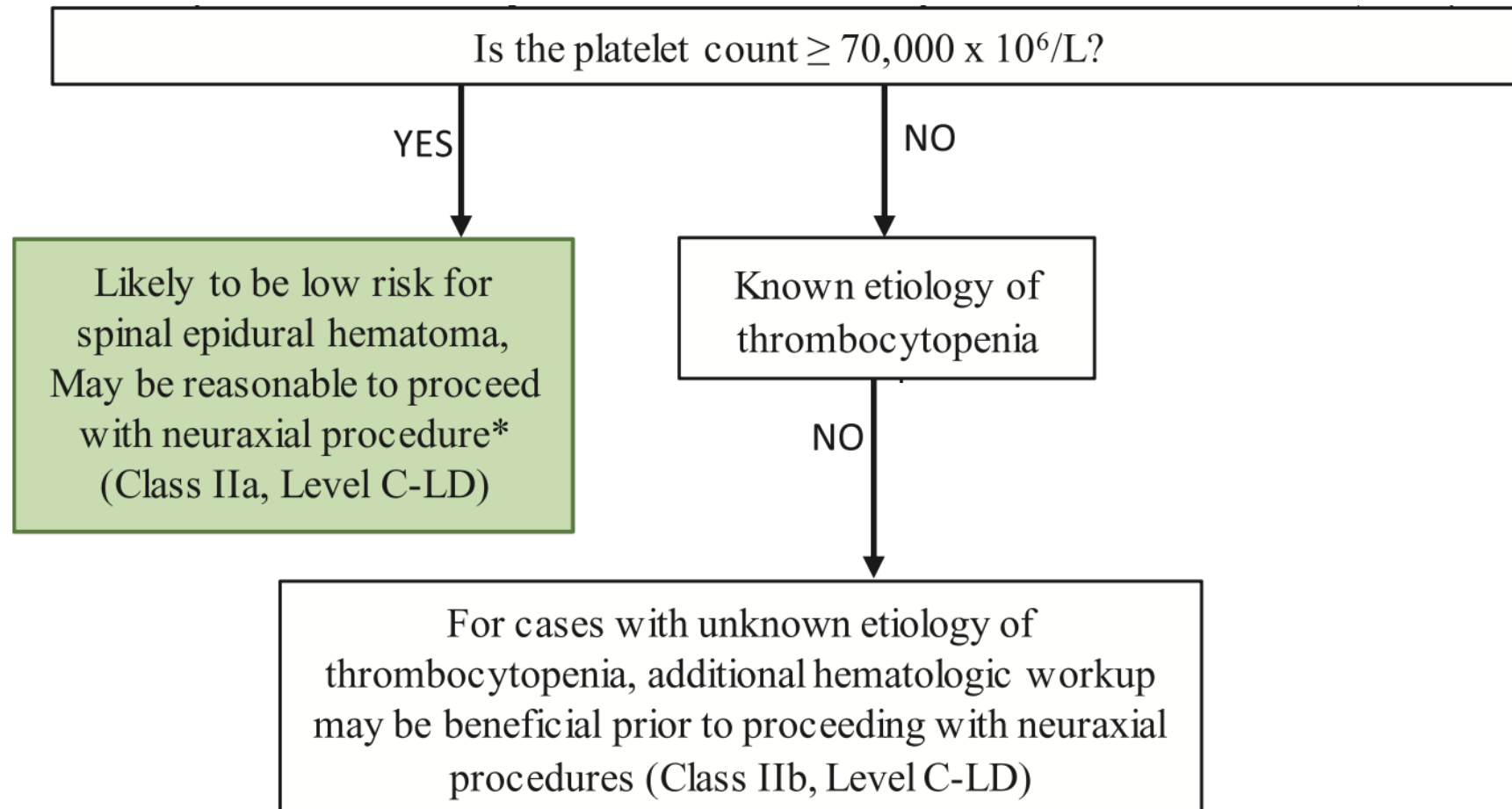
Thrombocytopenia



Thrombocytopenia



Thrombocytopenia



“Magic” Platelet Number

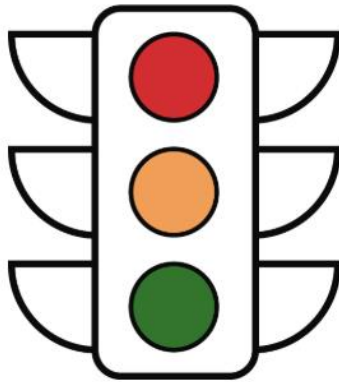


FIG. 18.10

Neuraxial Procedures in Obstetric Patients with Thrombocytopenia.

Approach to obstetric patients with thrombocytopenia

Platelet count $<50,000 \times 10^6/L$

Risk of spinal epidural hematoma likely increased; reasonable to avoid neuraxial

Platelet count $50,000 - 70,000 \times 10^6/L$

Competing risks/benefits may justify proceeding with a neuraxial procedure

Platelet count $\geq 70,000 \times 10^6/L$

Risk of spinal epidural hematoma likely low; reasonable to proceed with neuraxial

Epidural catheter: Platelet count matters twice!



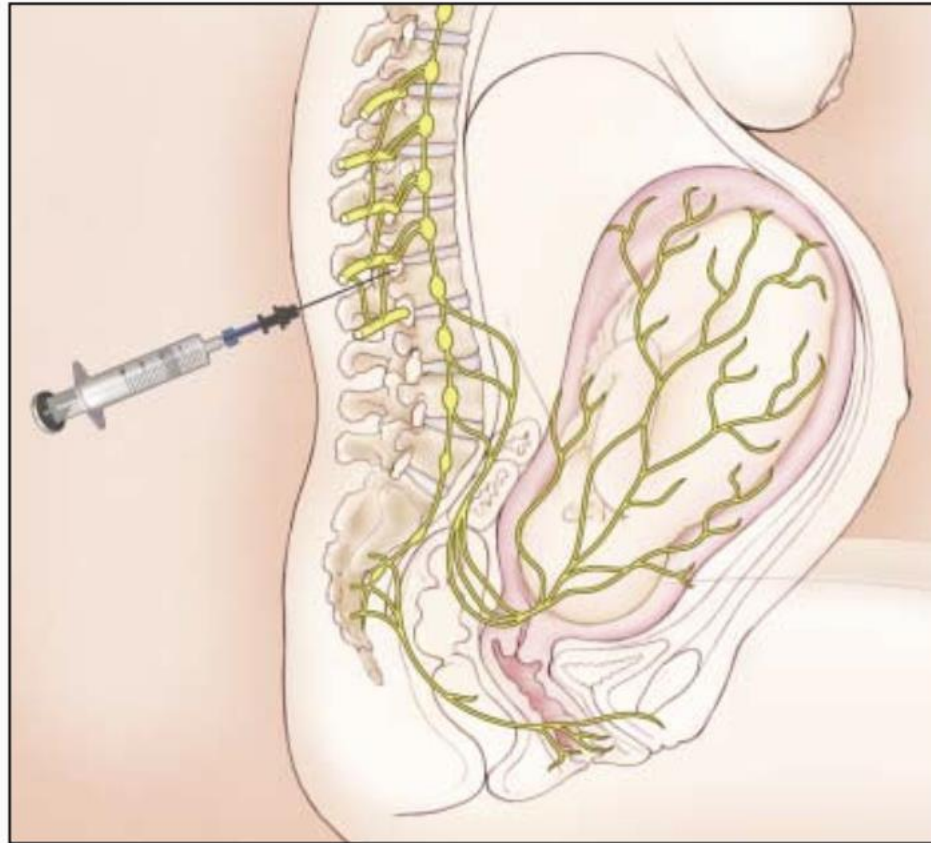
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Cesarean Delivery

Medicine is art, not a science.

Cesarean Delivery



Cesarean Delivery
T6 – L2

Case Review: What to do?

26 yo G2P1001 @ 39 weeks, scheduled CD for breech

w BTL

- Healthy
- G1: ~~NSVD~~ 1 prior CD
- Ht: 5'8" (172), Wt: 180 lb (81kg), BMI: 27

Answer: one-shot spinal

Case Review

- 30 yo G2P1001 @ 37+ wks
- Active labor, PROM
- 1 prior CD, declines TOLAC
- Healthy
- G1: failed indx @ 41 wks
- Ht: 5'4"(163 cm) Wt: 250lb (113 kg)
- BMI: 43

Answer: Spinal v CSE

Case Review

- 40 yo G2P1001 @ 36 wks
- Active labor, PROM, breech
- G1: NSVD
- h/o DVT
- Lovenox qD (last dose 8 hrs ago)
- Ht: 5'4" (163 cm) Wt: 250lb (113 kg)
- BMI: 43



enoxaparin – Low Dose Qday

Place Neuraxial Block?

12 Hours

Low Dose enoxaparin (40 mg once daily)

We recommend that needle placement should occur at least 12 hours after low- dose LMWH. Consider checking aXa activity level if <12 hours. An acceptable level of residual aXa activity remains undetermined, therefore we suggest aXa value of ≤ 0.1 IU/mL Heparin-induced

Answer: GETA

Case Review

42 yo G4P2013 @ 39 weeks, repeat CD (x3)

- GDM (insulin), CHTN (labetalol)
- OBHx:
 - G1: CD for twins
 - G2: repeat CD
 - G3: SAb @ 11 wks, D&C
 - G4: current
- Ht: 5'4" (163 cm) Wt: 306 lb (138 kg)
- BMI: 52

Answer: CSE (down-dose spinal)



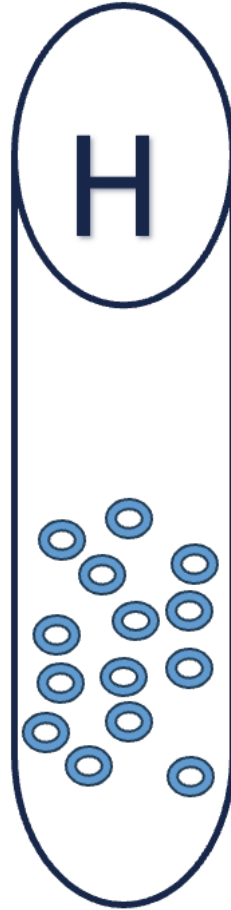
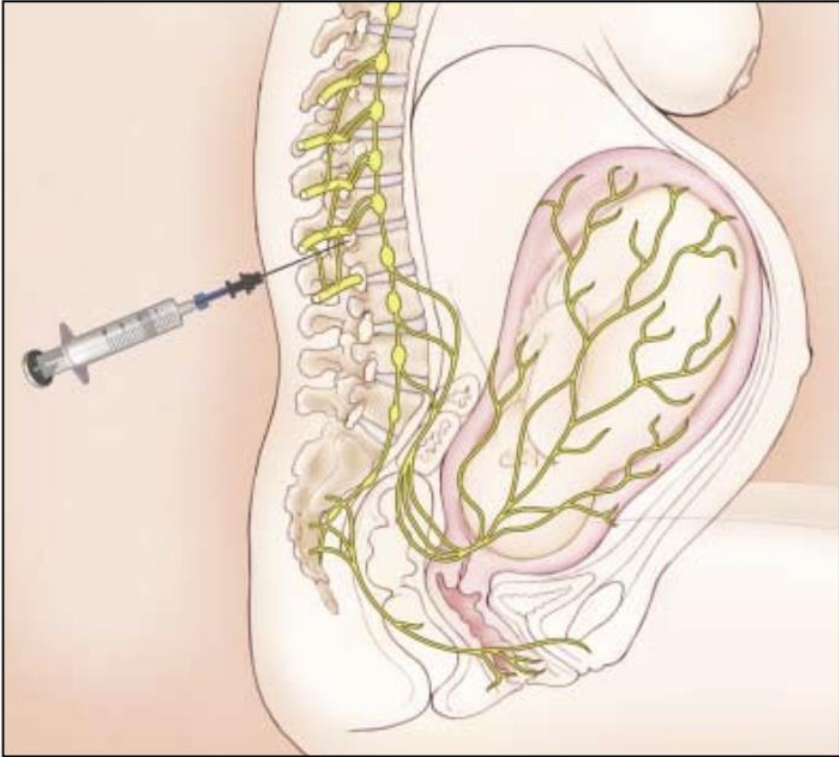
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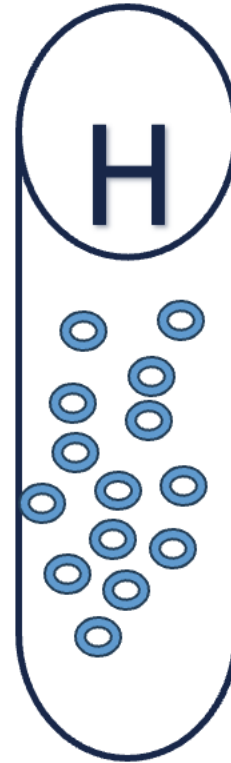
Anesthesia Emergencies

When #*\$# Hits the Fan

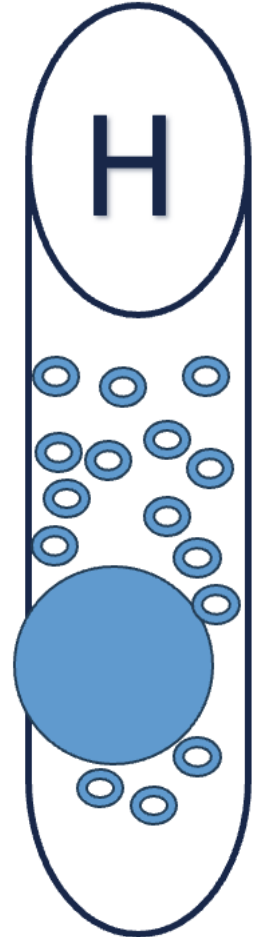
High Spinal... How Does It Happen



Avg ht/wt
No EPID



Short stature
<5 ft



Small thecal
space

C3- 4- 5 keeps the diaphragm alive...

Signs/Symptoms:

High block

Dyspnea

Impaired phonation

Anxiety

Hypotension

Respiratory collapse (rare)

Management:

Assess block level

Suppl O2

Reassurance

Ventilatory support

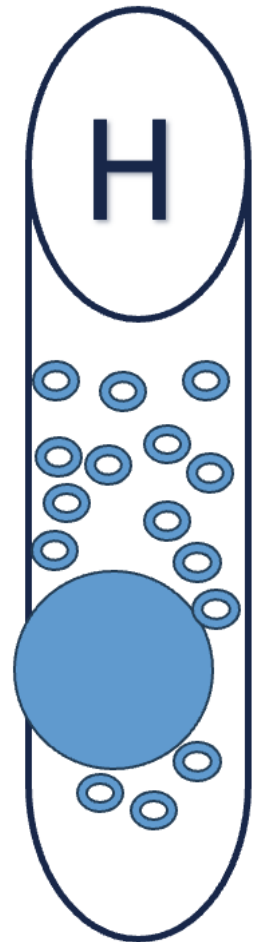
Consider intubation

Communicate with the team... move to delivery expeditiously.

Case Review

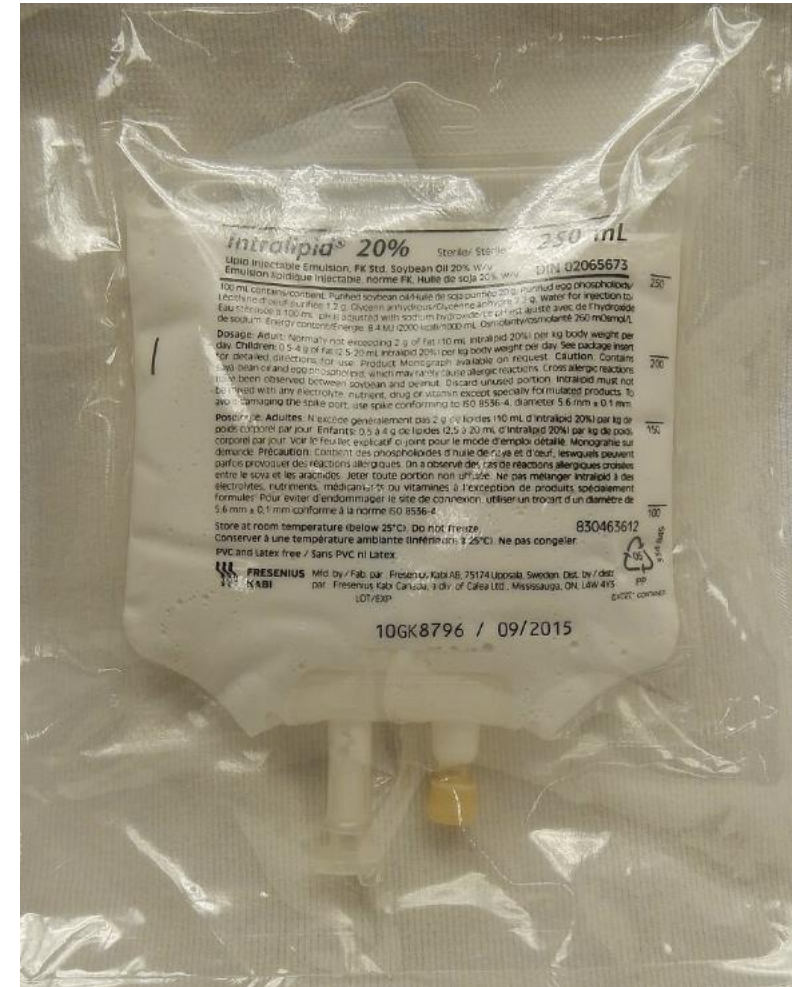
- 38 yo G1P0 40+ wks, PDIOL
- Day 3... failed indx
- 8/100/0 (x 6 hrs)
- Normal ht/wt
- GDM-diet controlled
- EPID x 14 hrs
- c/o shoulder & back p
- Patchy block
- Plan:
- To OR
- One-shot spinal

HIGH SPINAL

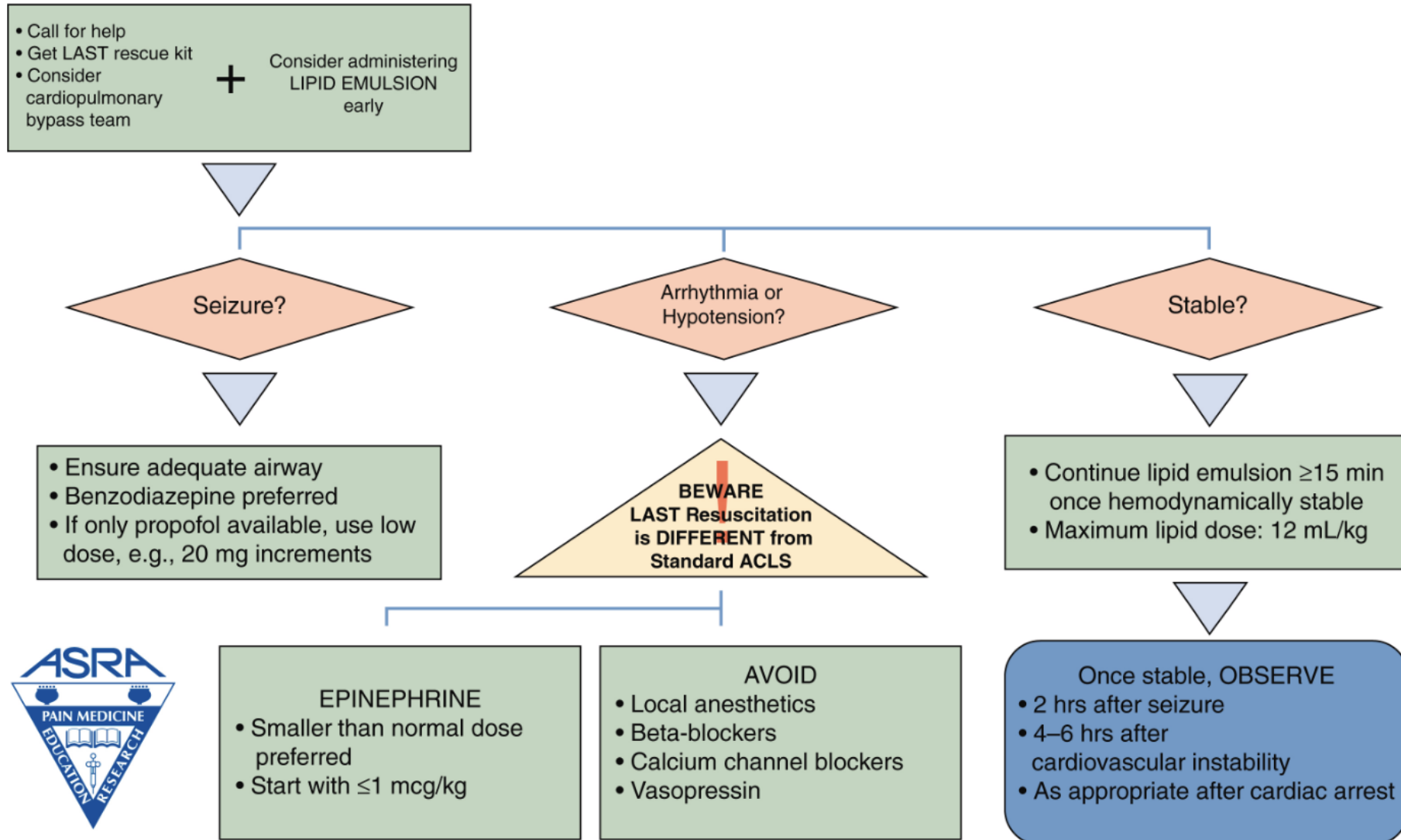


Local Anesthetic Systemic Toxicity (LAST)

- Inadvertent IV injection LA
- Bupivacaine
 - Long-acting
 - Binds cardiac Na-channels
- Rare on OB
- Safety mechanisms
 - Incremental dosing
 - Avoid high-dose, high- risk meds
 - EPID --> CD
 - Lidocaine & chloroprocaine



LAST... What to do?



Pregnant Airway

Airway:

- Weight gain: edema, adipose
- Breast enlargement
- ↓ FRC
- ↑ O₂ consumption
- ↑ Vascularity, friable mucosa

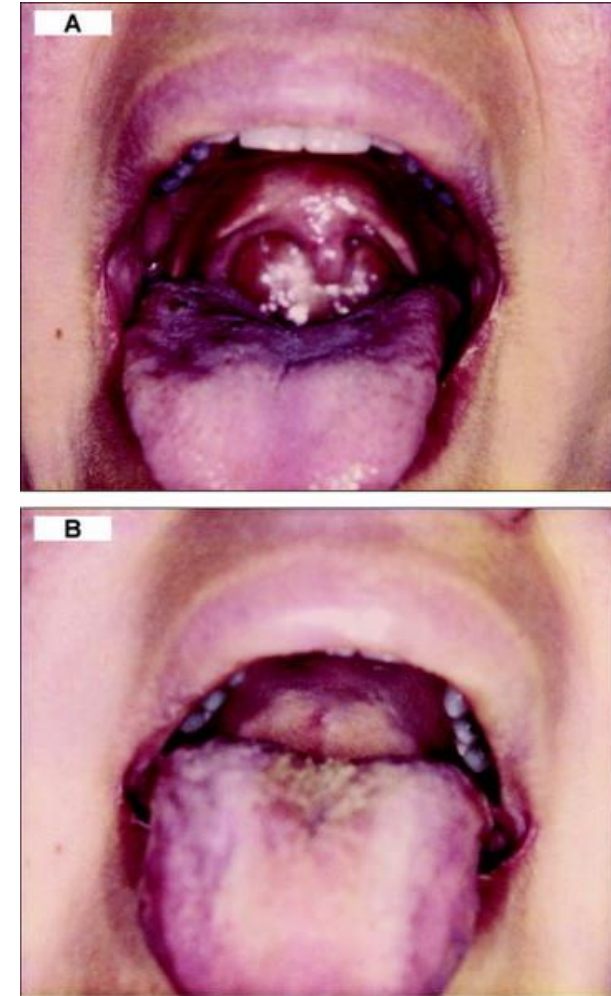
Gastrointestinal system:

- LES tone ↓
- GERD: 2/3 pts
- Gastric emptying
 - Unchanged in non-laboring pts
 - ↓ with labor, stress, opiates
- Full stomach

Difficult Airway

- 8x more common in OB
- Aspiration, hypoxia
- Cardiac events
- Poor fetal outcomes
- Death

Consider early epidural



Case Review

24 yo G1P0 IOL

Day 2 indx

Balloon out, 4 cm

GHTN

Obese, BMI 62

Labor DPE--> comfortable

15 min later ... AROM

Cord prolapse

Load EPID, running to OR



Case Review

24 yo G1P0 IOL

Day 2 indx

Balloon out, 4 cm

GHTN

Obese, BMI 62

~~Labor DPE--> comfortable~~

15 min... AROM

Cord prolapse

Load EPID, running to OR

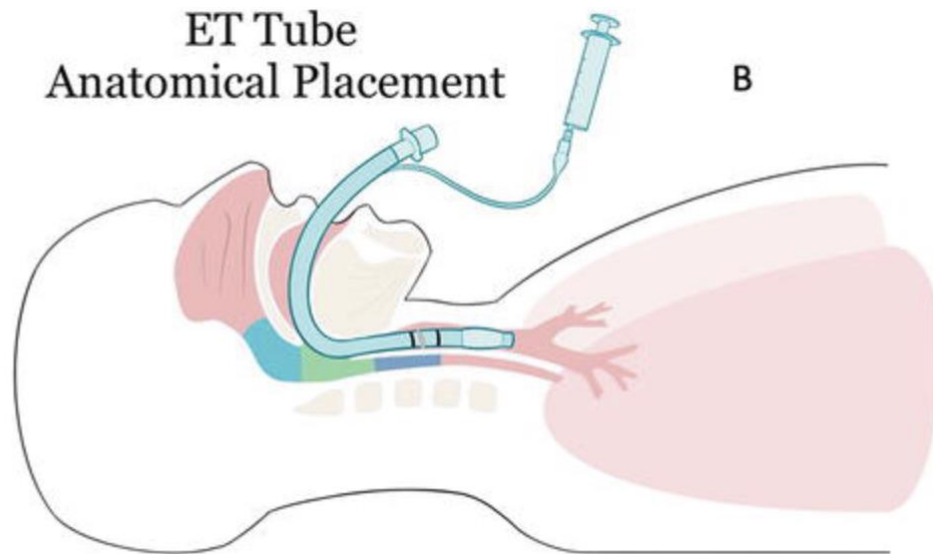
General Anesthesia



No block

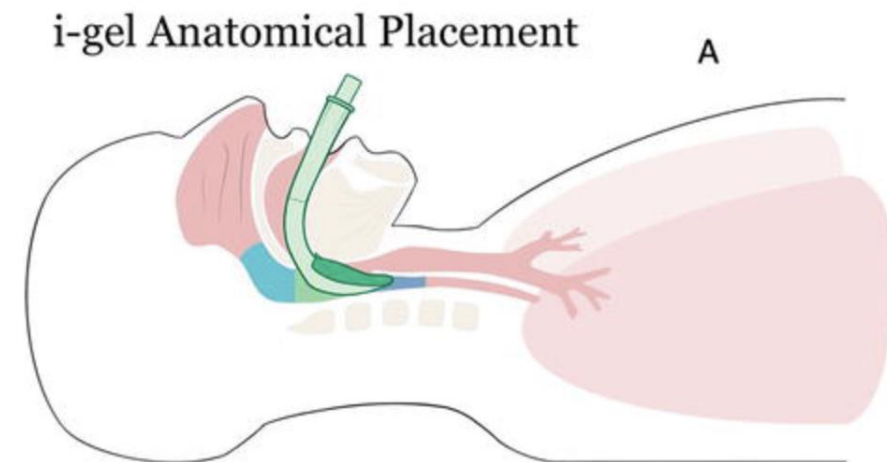
Endotracheal Tube

- Positive pressure ventilation
- Protect lungs from aspiration
- Surgery implications



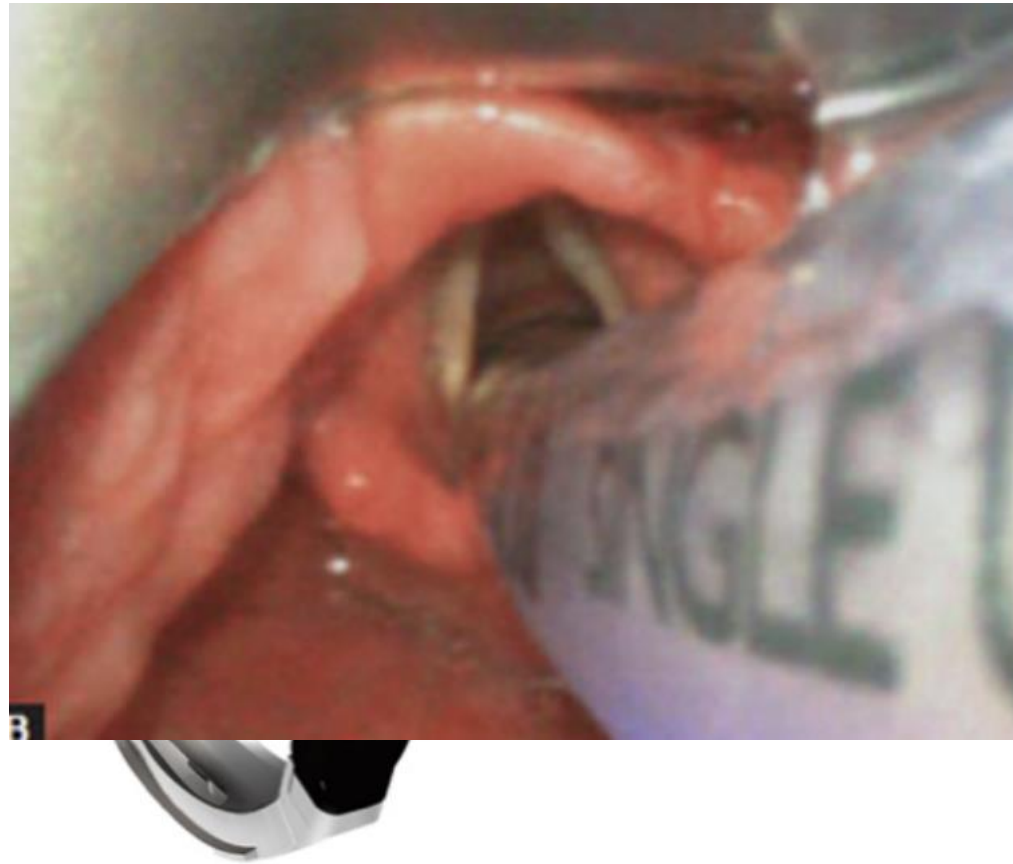
Supraglottic Device

- Patent airway
- Difficult airway algorithm
- Aspiration risk



Stat CD→ General Anesthesia

- Pre-O2
- Prep/drape
- Drugs:
 - Propofol
 - Succinylcholine
- Laryngoscopy→ ETT
- GO!



Hemorrhage: Preparation & Collaboration

↑ Risk

- Obesity
- Hx of PPH
- Multi-gestation
- Macrosomia
- Fibroids
- Prolonged labor
- Infection

Planning

- Cognitive aids
- Protocols & staging
- 2 PIVs
- T&S, T&C
- TXA
- Uterotonics

Placenta Accreta Spectrum

Team:

- OB/MFM
- Nursing (OB, OR, NICU)
- Interventional Radiology
- Cardiac Perfusionist
- Gyn Onc
- Urology
- General Surgery

Plan:

- CSE → General
- 2-3 PIVs
- Arterial line
- Blood products
 - 4 (red): 4 (plasma): 1 (plt)
- Cell saver
 - (leukocyte-reduced filters)
- Belmont rapid infuser
- MTP

Gratitude

- Burning questions
- Muddy points
- Take-home pearls

