

Horner's syndrome with ipsilateral upper limb paraesthesia following epidural top-up for caesarean section

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Case Summary

We present a case of left-sided Horner's syndrome with ipsilateral upper limb paraesthesia in a 42-year-old patient with a history of antiphospholipid syndrome (APS) and recurrent miscarriages, following epidural top-up for emergency caesarean section (EMCS).

Timeline of Events

4:00am – Labour Analgesia

- Epidural requested
- L3/4 epidural sited on first attempt
- Test dose administered
- Patient-controlled epidural anaesthesia commenced

4:30pm – Slow to Progress

- Vaginal examination: **4 cm** dilated despite oxytocin
- Patient consented for **Category 3 EMCS**

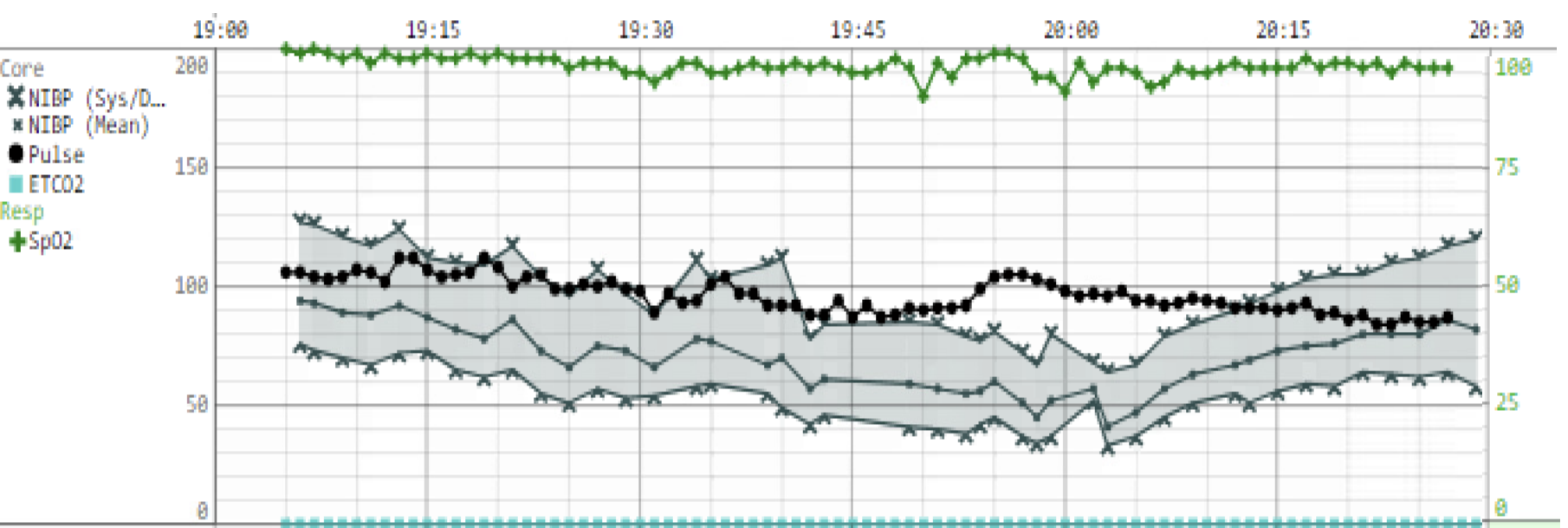


Figure 1 – Patient's intra-operative observations during EMCS

7:40pm – Complication: Obstetric Haemorrhage

- Estimated blood loss: 1.6 litres**
- Maternal obstetric haemorrhage call** placed
- Patient unwell: **hypotension + reflex tachycardia** [Fig 1]
- Resuscitated with **fluids, blood products, vasopressors**

8:30pm – Neurological Symptoms Noted

- Partner reports **left eye 'droopy'**
- Examination findings [Fig 2a, 2b]:
 - Left-sided **ptosis, enophthalmos, conjunctival injection, miosis, anhidrosis**
 - Upper limb **paraesthesia**, mild motor **weakness**
 - Sensory block extended to T1 (cold)
- Likely due to **cephalad local anaesthetic (LA) spread**
- APS-related risk** of neurological complications acknowledged

2:00am – Resolution & Management

- Neurological symptoms resolved** after 6 hours [Fig 2c]
- Prophylactic LMWH** recommenced until **6 weeks postpartum**

Patient Information			
Age	42♀	Gestation	39+2/40
BMI	30.1	PMH	APS Prev miscarriage IVF pregnancy
Gravida/ Parity	5/0	DH	Aspirin OD Dalteparin BD

7:00pm – Anaesthesia for Surgery

- Epidural top-up administered
- Achieved **bilateral T4 block to cold**
- Bromage grade two motor block**

7:30pm - Delivery

- Surgery commenced
- Baby delivered **uneventfully**



Figure 2 Patient with left-sided Horner's syndrome
(a) In recovery (b) after 1h (c) after 6 h

Clinical Question – “What is most likely?”

📌 *Acute neurological symptoms in a high-risk obstetric patient — what is the most likely cause?*

Benign Cause

Rare complication of epidural anaesthesia

- Cephalad spread of LA
- Self-limiting, resolves with time

VS

Serious Cause

Thrombotic event in the context of APS, prolonged labour & MOH

- Prothrombotic state
- Hypotension increases stroke risk
- Potential for lasting neurological damage

📌 *Early recognition and a structured diagnostic approach are essential.*

Antiphospholipid Syndrome

Overview

- Autoimmune prothrombotic disorder** involving antiphospholipid antibodies
- Associated with **arterial and venous thromboses** and **pregnancy morbidity**
- Can occur as a **primary condition** or secondary to systemic lupus erythematosus (SLE)
- In severe cases, can develop into **catastrophic APS**, with multi-organ involvement and high mortality (36%)⁴

Obstetric Relevance

- Defined as **Obstetric APS (OAPS)** when pregnancy complications dominate the presentation
- Associated with:
 - 70% rate** of adverse obstetric outcomes
 - Recurrent miscarriages**, especially in 2nd and 3rd trimesters
 - Pre-eclampsia, fetal growth restriction**, and **placental insufficiency**
 - Despite standard treatment (aspirin + LMWH), **20–30%** still experience complications⁴

Anaesthetic Considerations

- High thrombotic risk** throughout pregnancy, particularly during **labour and delivery**
- APS, hypotension and major haemorrhage** are strong pro-thrombotic triggers
- Balance anticoagulation timing** with thrombotic risk and neuraxial safety
- Anticipate **challenging neuraxial decisions**, especially in emergency settings
- Monitor for **persistent or atypical neurology**, warranting urgent further investigation

Horner's Syndrome

Overview

- Neurological disorder caused by disruption of the sympathetic nervous system
- Rare, benign, and typically transient complication of **lumbar epidural placement**
- Often caused by **inadvertent cephalad spread of LA**
- May precede signs and symptoms of **high neuraxial block**

Obstetric Relevance

- Higher incidence in **obstetric patients** (1.5–4%) vs ~0.5% generally
- Explained by:
 - Pregnancy-related anatomical/physiological changes**
 - Left-lateral positioning** → altered LA spread
 - Anatomical variation** (e.g., transverse/lateral septae)
 - Possible subdural spread** (dural puncture or catheter migration)²

This Case

- Classic symptom cluster** observed
- Ipsilateral upper limb paraesthesia and weakness** → suggests LA spread to **brachial plexus**
- Symptom onset and resolution** consistent with literature

Conclusions

- Horner's syndrome, though rare, is a benign complication of epidural anaesthesia - especially in obstetric patients.
 - Prompt recognition helps alleviate anxiety and guides safe monitoring for progression or high block features.
- ⚠️ In patients with antiphospholipid syndrome (APS), neurological symptoms raise the possibility of thrombotic events, particularly following haemorrhage or resuscitation.
 - Differentiating epidural-related complications from life-threatening pathology is essential.
- 🔗 Anaesthetic vigilance is key:
 - Consider the impact of obstetric complications and anticoagulation therapy during assessment, anaesthesia, and counselling.
 - Investigate persistent or evolving neurology urgently.

References

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