

“The curious incident of the p-wave asystole at the crash section”

- a case report

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Background:

- 25-year-old primiparous patient
- Fit and well. NKDA. Normal BMI
- Admitted to labour ward with reduced foetal movements at 37+2/40
- No concerns throughout pregnancy - low risk

The Case:

- “Maternal request” labour epidural inserted approx. 12:00
- Dural tap with 18G Tuohy needle at L3/4. Needle removed. Epidural successfully sited at L2/3
- Uneventful test dose of 5mls + 15mls loading dose given (0.1% Levobupivacaine + 2mcg/ml Fentanyl)
- Haemodynamically stable post-test and loading dose, epidural commenced
- Approximately 40 minutes post-loading dose, patient became unresponsive while repositioning on bed
 - episode lasted approx.15 seconds, associated with hypotension
- Resolved with 100mcg Phenylephrine + 1000ml Hartmann’s solution

Transfer to theatre:

- Category 2 LSCS at 20:00 due to failure to progress
- Epidural top up: 7.5ml 2% Lignocaine + 7.5ml 0.5% Levobupivacaine - block to T4 after 10 minutes
- Patient repositioned prior to knife-to-skin – further unresponsive episode associated with airway obstruction and upper limb hyperextension
- Immediately transferred to left lateral position with jaw thrust to maintain airway
- 3-lead ECG showed Asystole, SpO₂ normal, NIBP cycling
- Carotid pulse not palpable so transferred to supine position in preparation for chest compressions
- 3-lead ECG then showed normal sinus rhythm, GCS returned to 14/15 and pulses
- Cat 1 LSCS declared: further loss of consciousness, airway obstruction, abnormal posturing and asystole at knife to uterus
 - resolved spontaneously after 15-20 seconds
- Arterial line placed. Uneventful rest of the surgery
- Multiple further asystolic episodes on transfer off surgical table and on removal of epidural catheter

Post-op:

- Diagnosis of P-wave asystole made by cardiology team
- Transferred to ICCU for further investigation and monitoring
- 72-hour tape recording and ECHO performed - both NAD
- Patient made full, uneventful recovery and discharged home

Diagnosis:

- Seen in follow-up clinic by anaesthetist with cardiology interest
- No cardiac cause established
- Asystole attributed to inadvertent intrathecal local anaesthetic spread secondary to accidental dural puncture



Don’t get in a flap:

- “Flap-valve” between epidural and intrathecal spaces created by accidental dural puncture
- Resulted in intrathecal local anaesthetic boluses on movement, causing hypotension, arrhythmias and loss of consciousness
- P-wave asystole recognised as a severe manifestation of high spinal block due to sympathetic blockade



- ↑intrathecal drug spread is a recognised complication of dural puncture
- However such distinct, pressure-related “boluses” causing transient high block are less well described

- Key learning points:**
- Consider the risks and benefits of inserting a (carefully-managed and well-labelled) intrathecal catheter in the event of accidental dural puncture
 - Siting a successful, working epidural catheter following inadvertent dural puncture does not remove the risk of complications, particularly when using the epidural for surgical anaesthesia
 - Rapid multidisciplinary assessment is required for patients with arrhythmias compromising

References

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