Topping up the epidural for emergency caesarean section

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- It often doesn't work
- Tell the patient it may not work
 - Pain; GA
- Top it up or take it out?
- What drugs
 - ? Fastmix ? Opioids
- Test Dose
- Test your block
- Document the block

It often doesn't work

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 - RCA audit standard 3% GA conversion rate

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 - Optimistic standard

It often doesn't work





'I'm too scared to give birth again after hospital gave me caesarean without pain relief'



It often doesn't work

Netmums:

- "My 2nd section was terrible and left me traumatised for months after. When telling anyone my experience I ended up in tears"
- "...I still have not properly bonded with my daughter. I have been diagnosed as having Post Traumatic Stress Disorder and find it very hard to cope with all that has happened to me. I find it very hard to trust anyone in authority especially doctors...I'm afraid to even have sex with my husband in case I get pregnant again"
- "I have had nightmares and flashbacks for years and even terminated a pregnancy a year later to my eternal shame."

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...and document that you have told them

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Top it up or take it out?

Failure of top-up more likely if:

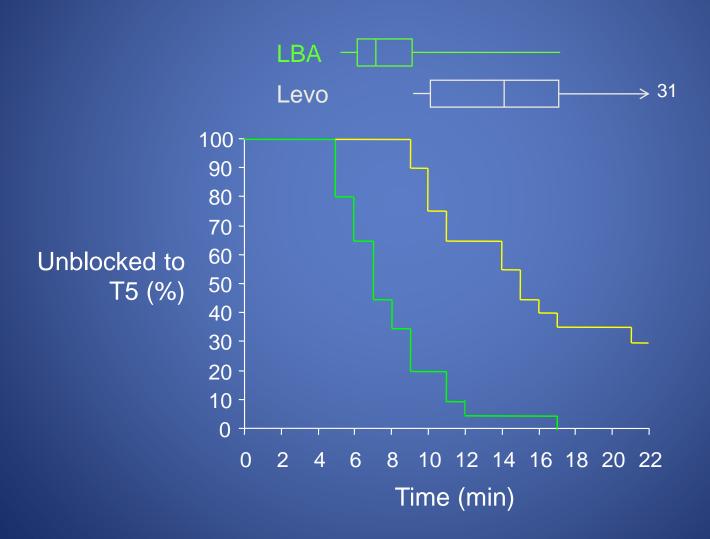
- More top-ups in labour
 - Comfortable, infrequent top-ups good
 - Uncomfortable, frequent top-ups bad
- Anaesthetist top-ups
- uneven block
- More urgent caesarean
- Non-obstetric anaesthetist

Bauer M et al. Risk factors for failed conversion of labor epidural analgesia to caesarean delivery anestheisa: a systematic review and meta-analysis of observational trials. *IJOA* 2012 294-309

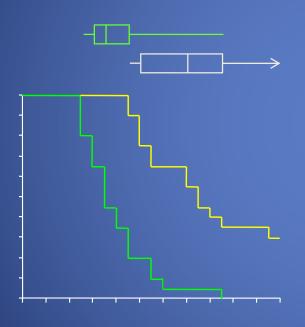
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Allam J, Malhotra S, Hemingway C, Yentis SM. Epidural lidocaine—bicarbonate—adrenaline vs levobupivacaine for emergency Caesarean section: a randomized controlled trial. *Anaesthesia* 2008;63:243-9.



Allam J, Malhotra S, Hemingway C, Yentis SM. Epidural lidocaine—bicarbonate—adrenaline vs levobupivacaine for emergency Caesarean section: a randomized controlled trial. *Anaesthesia* 2008;63:243-9.



- 46 patients
- Not powered to compare supplementation/GAs
- But GA/supplementation rate reduced

"Fastmix" Solution

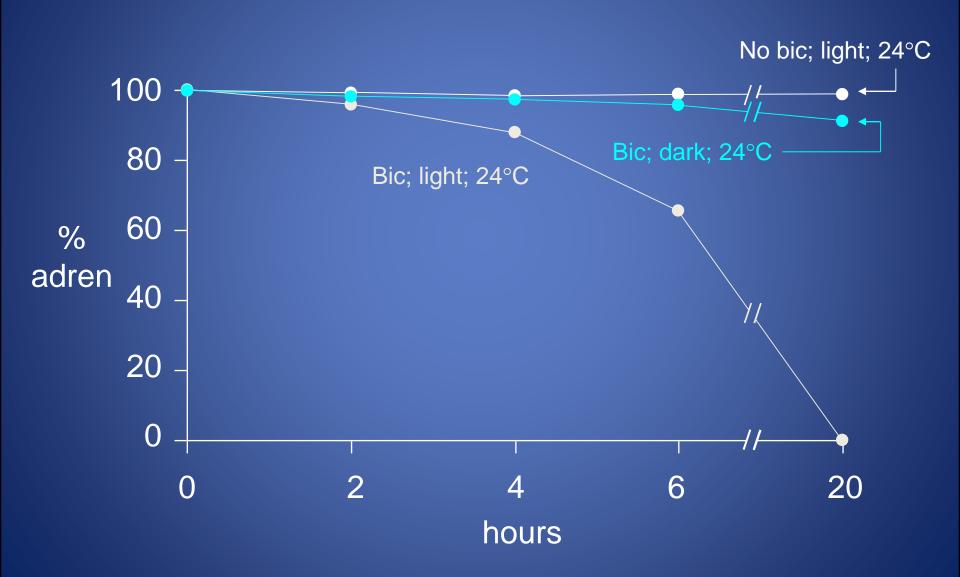
2% Lidocaine 20ml

8.4% Na Bicarbonate 2ml

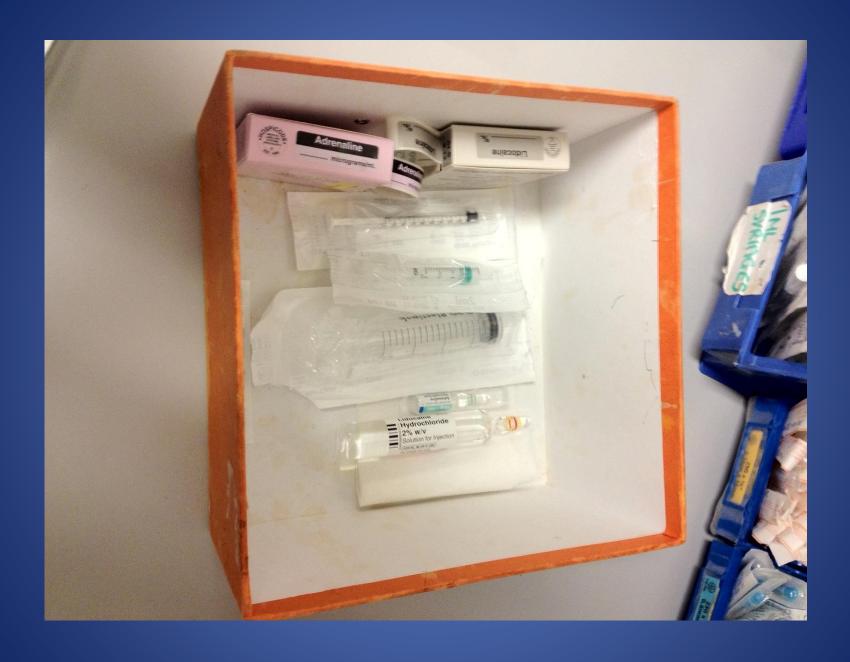
1:1000 Adrenalin 0.1ml

- Stable room temperature 4h
- Stable in dark at room temperature 12h

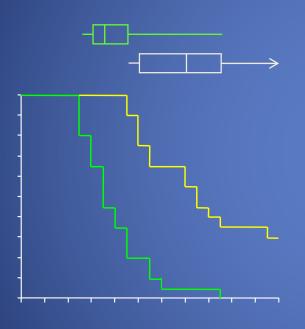
stability of pH-adjusted lidocaine-adrenaline epidural solution used for emergency caesarean section. *IJOA*: 17; 118-22







Allam J, Malhotra S, Hemingway C, Yentis SM. Epidural lidocaine—bicarbonate—adrenaline vs levobupivacaine for emergency Caesarean section: a randomized controlled trial. *Anaesthesia* 2008;63:243-9.



- Sequential analysis

- 46 patients

Hillyard S, Bate T, Corcoran T, Paech M, O'Sullivan G Extending epidural analgesia for emergency caesarean section: a meta-analysis. *BJA* 2011; 107: 668-78

- 779 patients in 11 trials
- Trials grouped together
- Lidocaine group quickest
- "insufficient trials to assess the effect of bicarbonate"
 - Time taken to prepare / "risk" of mixing drugs
- Recommended: Lido/adren for speed
 Ropiv 0.75% if more time

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Malhotra S. Extending low-dose epidural analgesia for emergency Caesarean section – a comparison of levobupivacaine with or without fentanyl. *Anaesthesia* 2007; **62**: 667-71

- Epidural analgesia Bupiv 0.1% and 2ug.ml⁻¹ fentanyl
- 20ml levobupivacaine 0.5% for Caesarean section
- + / fentanyl 75 ug or saline
- Randomised & blinded
- No differences in onset time / supplementation
- More intraoperative nausea & vomiting with fentanyl
 - 53% vs 18%

Malhotra S. Extending low-dose epidural analgesia for emergency Caesarean section – a comparison of levobupivacaine with or without fentanyl. *Anaesthesia* 2007; **62**: 667-71

- No need to give opioid with top-up
- Epidural diamorphine when convenient.

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Test Dose

- "Every dose is a test dose"
- 1 mg/Kg Lidocaine
 - 4ml Fastmix
- Facial paraesthesia at 1min
- Reduced hip flexion at 3 5 min

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Test and document the block

- Motor
- Cold
- Light touch

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