

Pro-Con debate on the use of CSE for labor analgesia

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Stated advantages with CSE

- Due to the technique
 - ?
- Due to IT drugs
 - Rapid onset
 - Less motor block
 - More rapid cervical dilation
- Empirical comparisons between non equivalent-equipotent doses of different mixtures of drugs

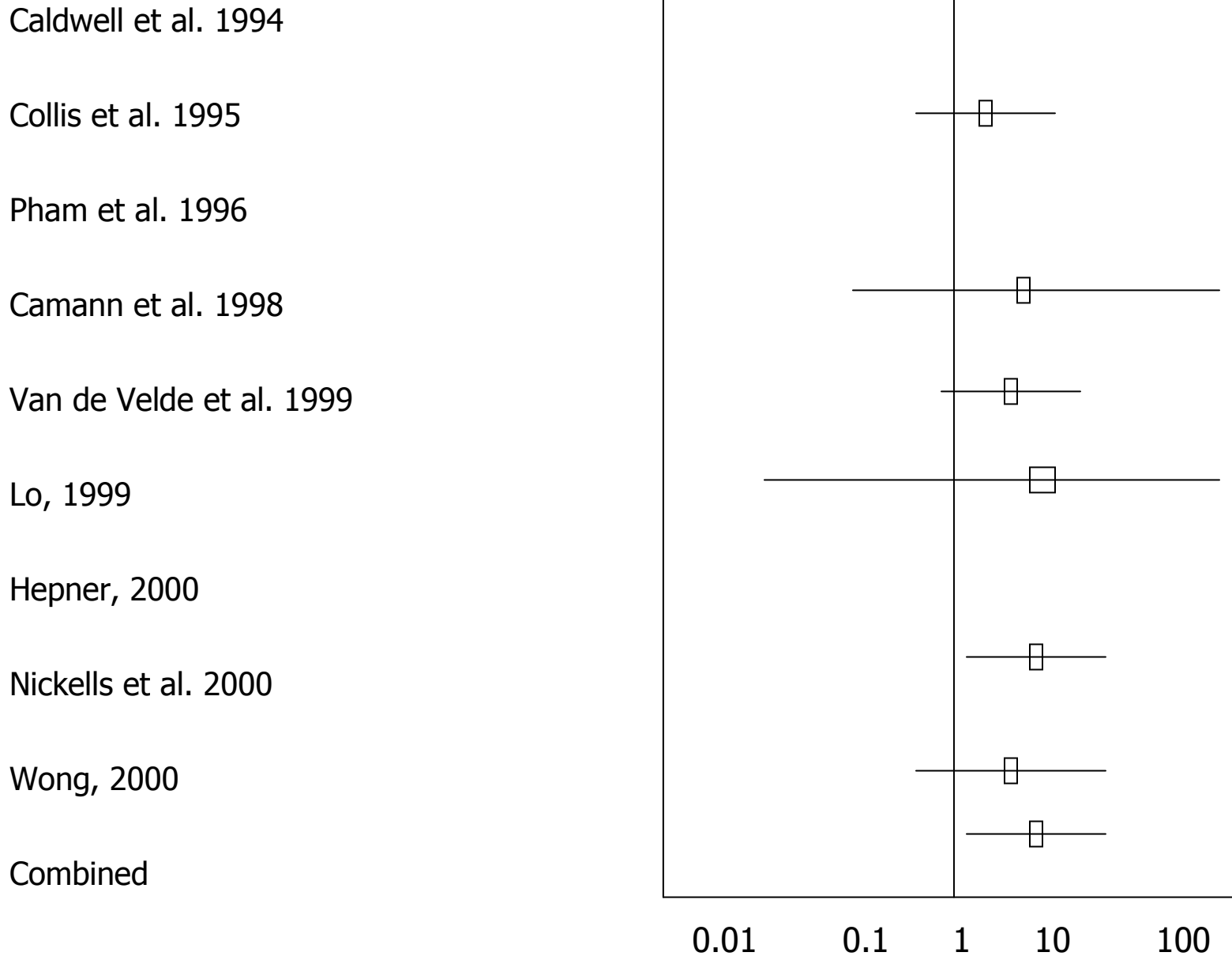
Does a few minutes advantage in analgesic onset matter?

- Time to effective analgesia CSE vs Epidural:
- 5.4 vs 12 min
Van de Velde M et Al. Acta Anaesth Belg 1999
- 10 vs 12 min
Nickells JS et Al. Anaesthesia 2000

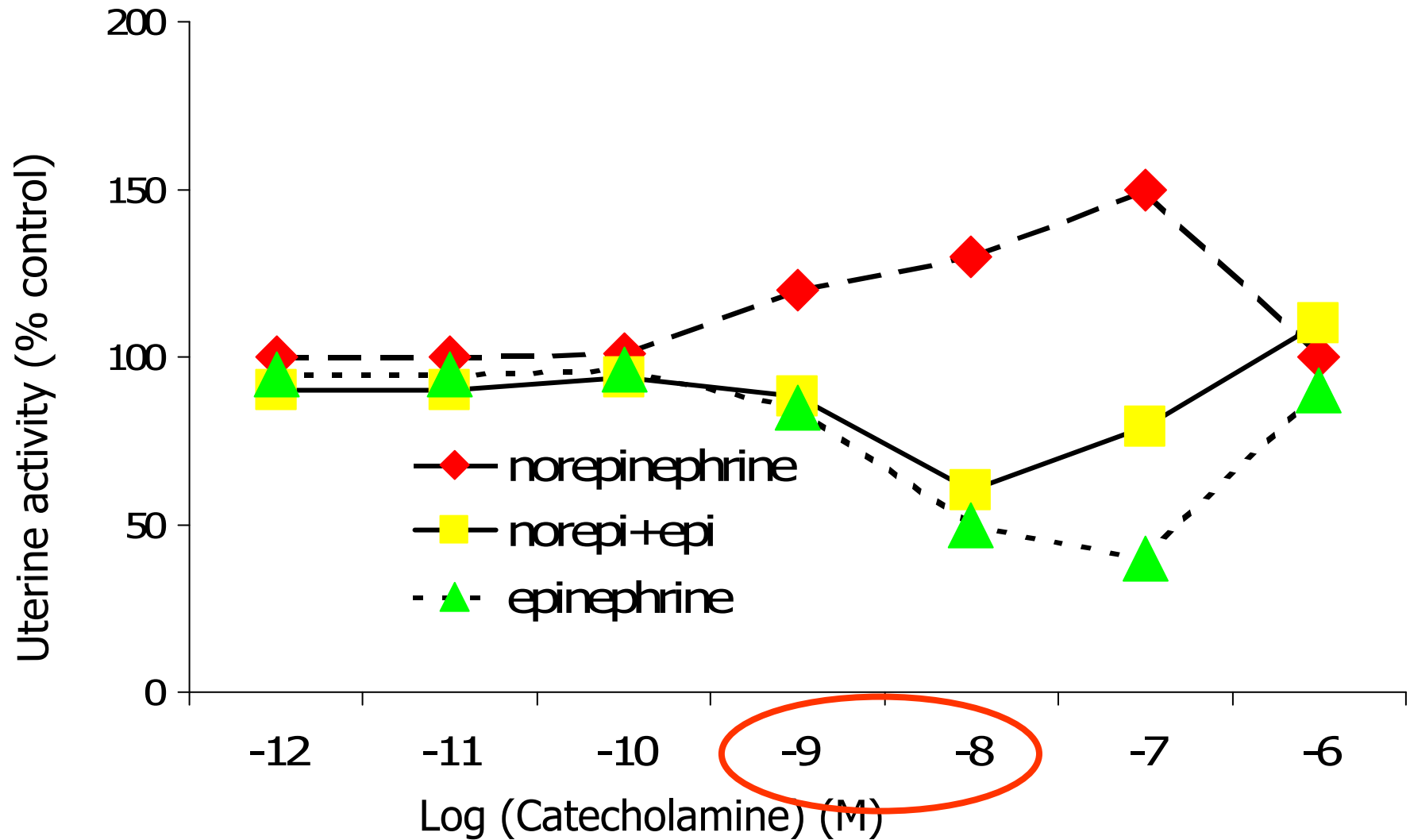
Faster onset of analgesia

- Faster is better?
 - FHR changes
 - Their meaning
 - Their clinical implications

Meta-analysis fetal bradycardia & IT opioids

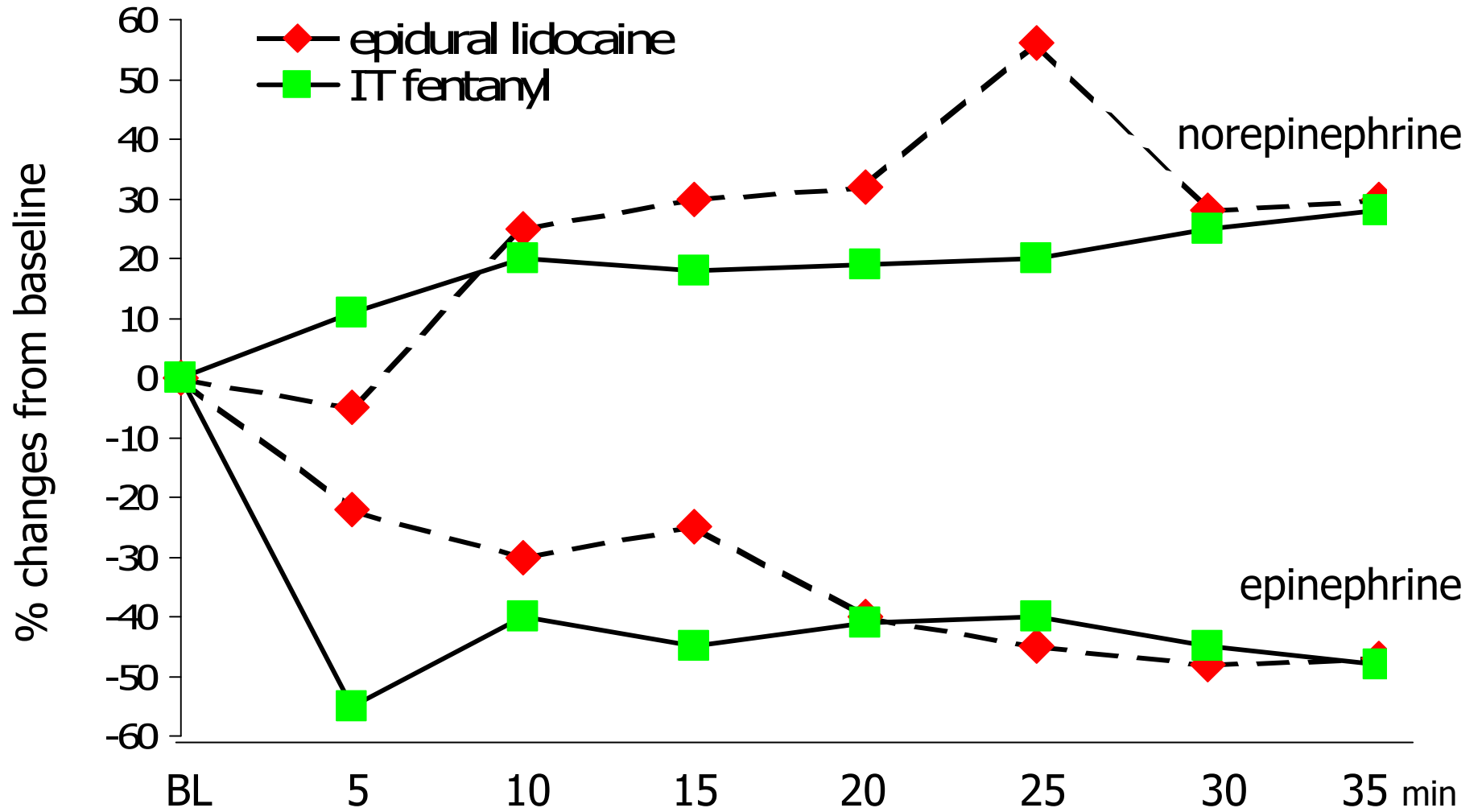


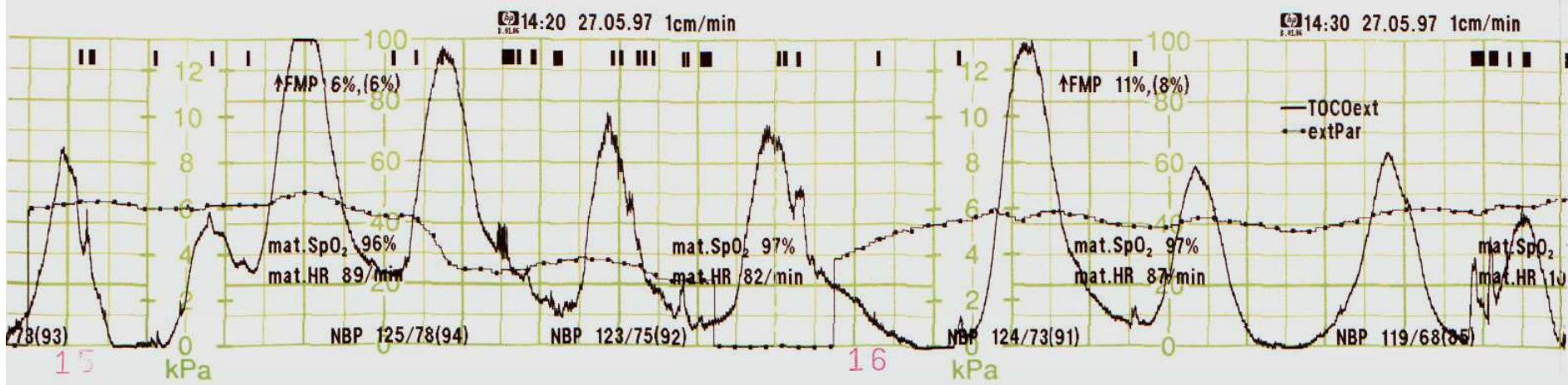
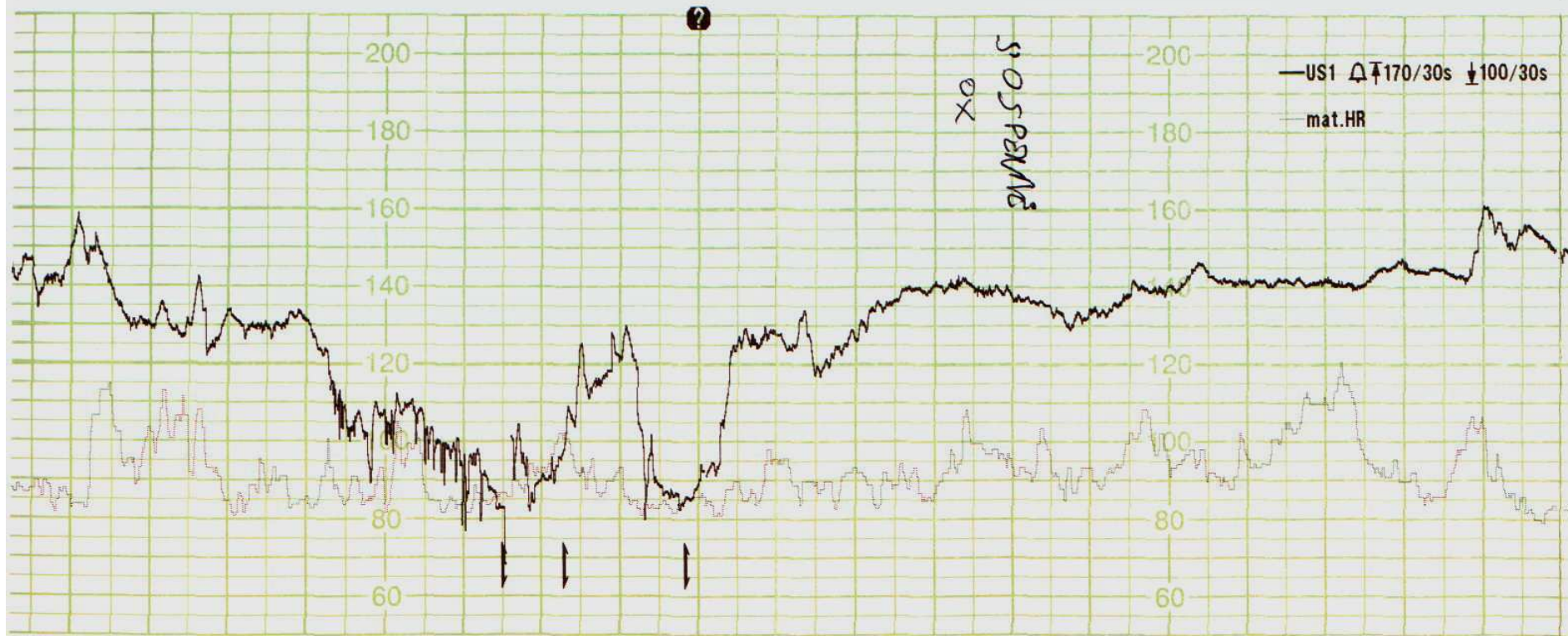
Effects of catecholamines on uterine activity



Segal S et Al. Anesth Analg 1998

Greater decrease in epinephrine levels after IT fentanyl





IT opioids

- Increased risk of fetal bradycardia
- Weak evidence of dose-responsiveness
- Differences between different opioids?
- Possible effects on ambulation (fear of opioid-related FHR changes and need for FHR monitoring)
- No effect on mode of delivery
- Increased risk of pruritus

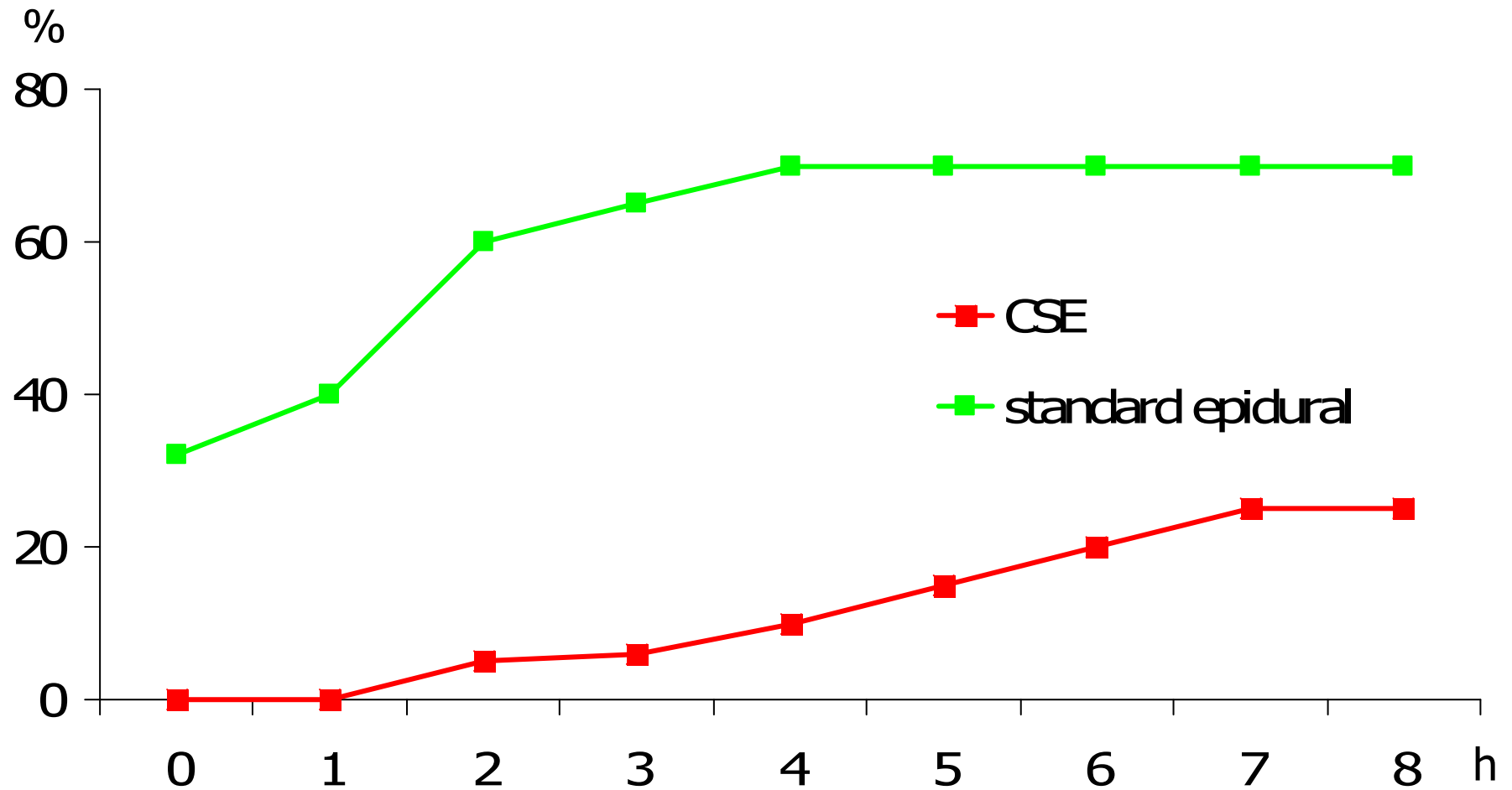
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Frequency of leg weakness

bupivacaine 0.25% 10 mL + bupivacaine 0.25%

2.5 mg bupivacaine and 25 mg fentanyl + bupivacaine 0.1% + fentanyl



Collis RE Lancet 1995

No differences in motor block

- bupi 2.5 mg + fentanyl 25 µg VS bupi 0.0625% + fentanyl

Hepner DL et Al. Can J Anaesth 2000

- ED50 motor block IT bupivacaine 3.4 mg (2.5-4.4)

Camorcia M et Al. Anesth Analg 2007

- ED50 motor block Epidural bupivacaine 0.26% (0.22-0.30)

Lacassie H et Al. RAPM 2007

Stated advantages with CSE

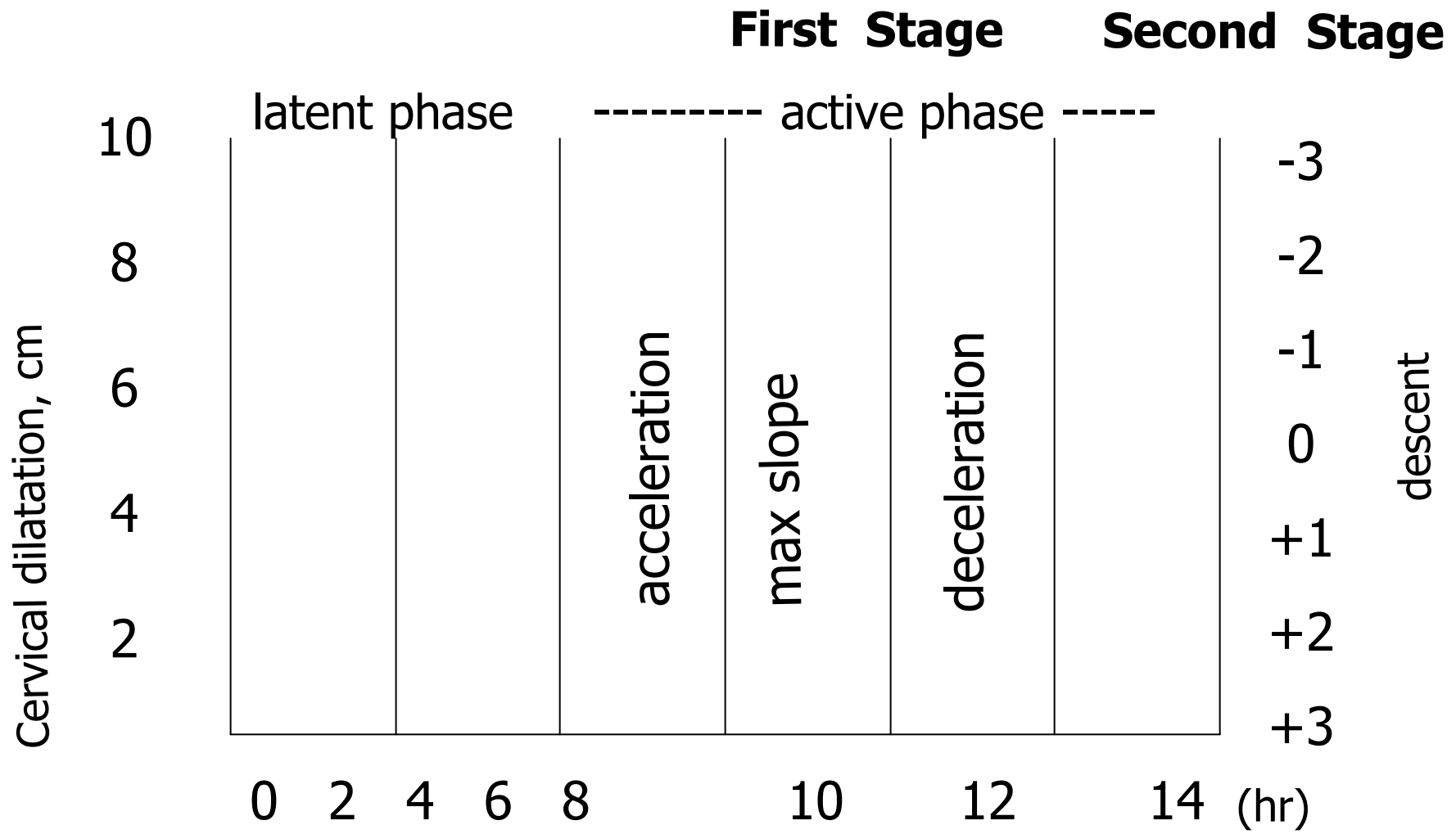
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More rapid cervical dilation with CSE

	CSE	Epidural
Analgesia to full CD (h)	3.8 (2.6)	5.1 (2.6)
Initial CD rate (cm/h)	2.1 (2.1)	1.0 (1.0)
Mean CD rate	2.3 (2.6)	1.3 (0.7)

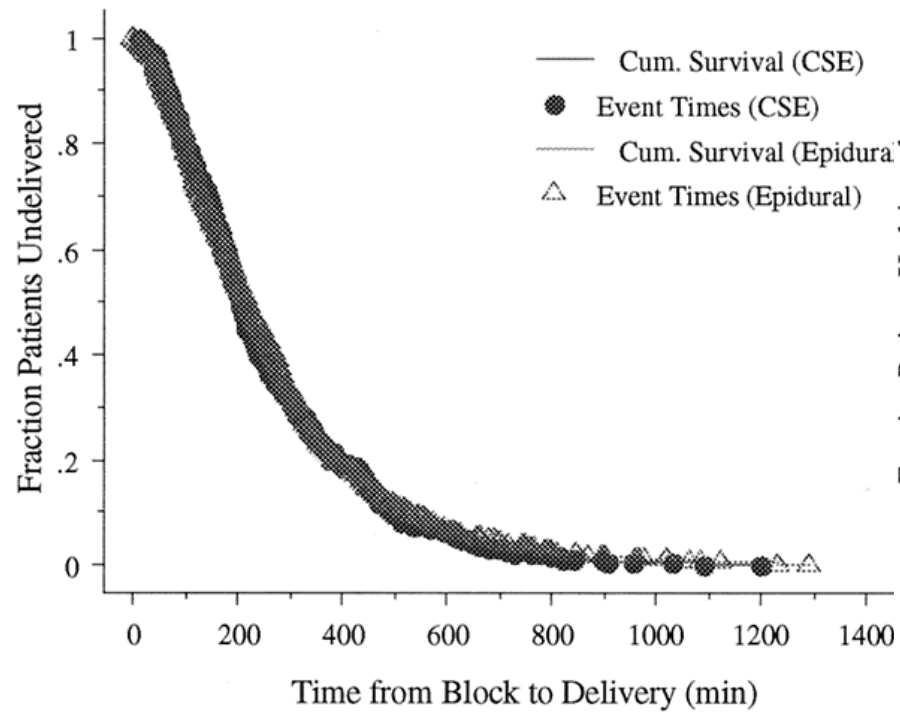
Limitation of the study in favour of more rapid cervical dilation

- No comparable analgesic protocols
 - CSE bupivacaine 0.25% 1mL with sufentanil (10 mcg)
 - Epidural bupivacaine 0.25% 12mL & continuous infusion bupi 0.125% and fentanyl
- Cervical examination at the discretion of the obstetrician
- First stage of labor defined as the interval between the initiation of analgesia until full dilatation
- Uncertainty of the time of full CD

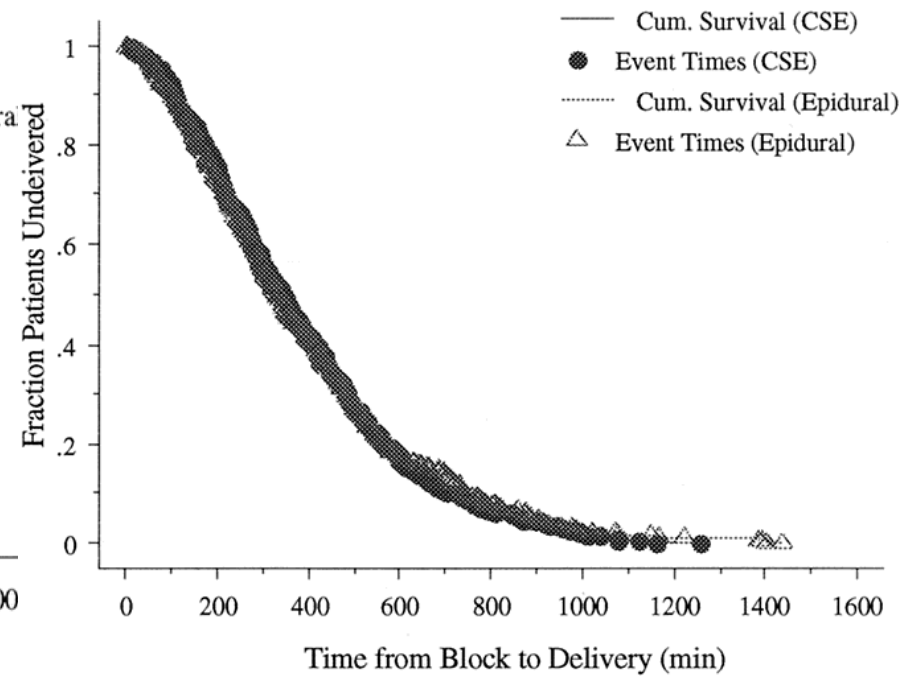


No differences in duration of labor

Nulliparous

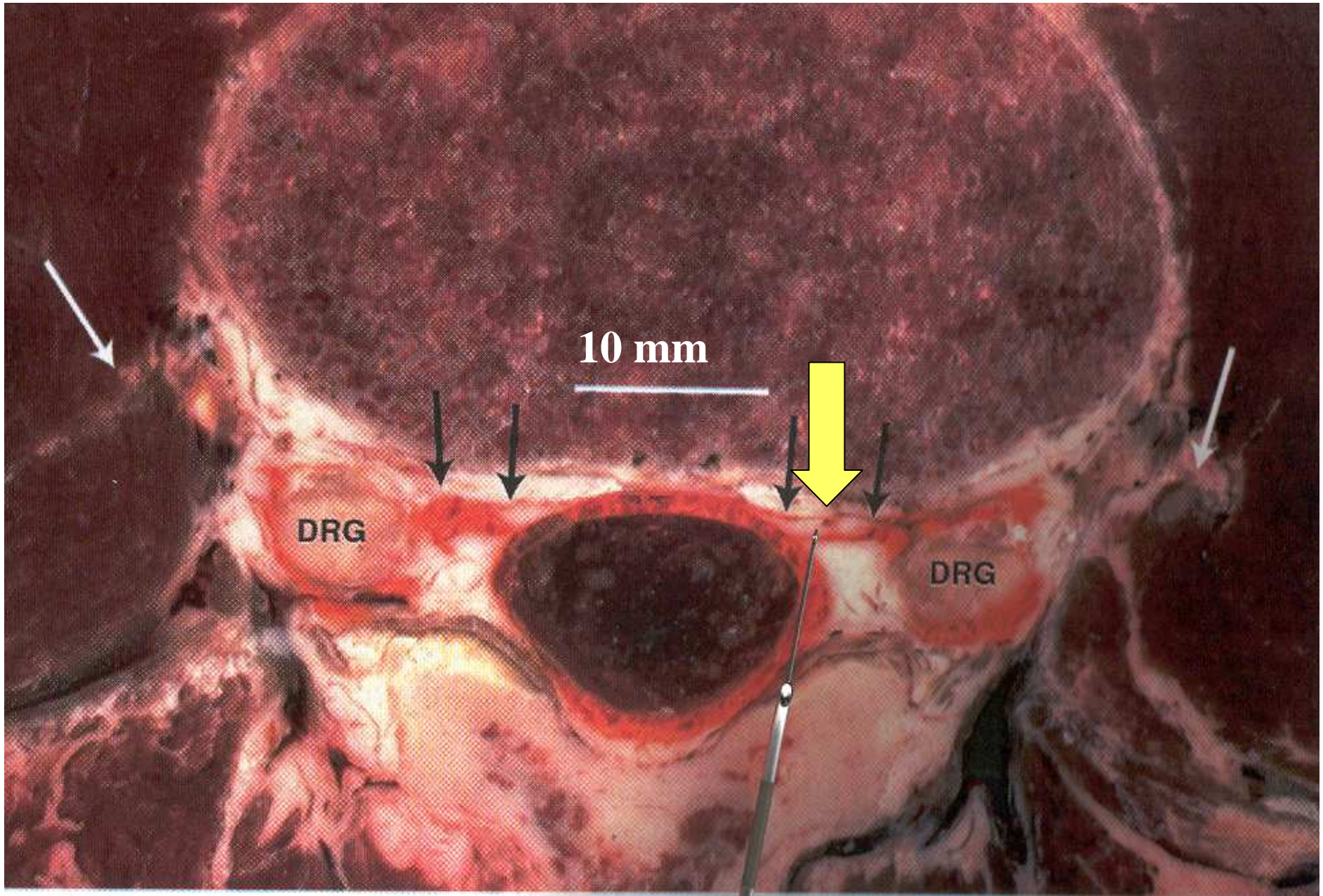


Parous



Problems with CSE

- Due to IT opioids
 - Respiratory depression *6 case reports*
 - Pruritus (1.3 vs 41.4%) *Eisenach JC Anesthesiology 1999*
- Due to the technique
 - Technical problems
 - Untested epidural catheter
 - Infectious complications



Untested epidural catheter

- Delayed discovery of an inadequate epidural catheter
- CSE avoided in case of increased risk of c-section

Meningitis

after regional analgesia for labor

Spinal	12	
CSE	7	
Accidental dural puncture & blood patch	2	
Uncomplicated epidural		6
TOTAL	21	6

Neurotrauma

- 4 cases
of damage to conus medullaris after CSE

Reynolds F. Anaesthesia, 2001

Why should I break her dura during labor?



Possible indications for CSE analgesia in labor

- advanced labor with unbearable pain (IInd stage)
- multiparity
- late request for analgesia
- previous back surgery
- previous blood patch
- accidental dural tap

Cochrane Systematic Review, 2007

(19 trials, 2658 women)

- No difference in overall maternal satisfaction despite
 - Slightly faster onset with CSE
 - Less pruritus with epidural
- No difference in
 - Ability to mobilize
 - Obstetric and neonatal outcome
- No conclusions regarding rare complications
 - Nerve injury
 - Meningitis

Safety record / worldwide use

Epidural



Combined Spinal Epidural

