SSAPM
Swiss Society for Anaesthesiology
and Perioperative Medicine

Failed epidural or spinal in obstetric anaesthesia: SAOA recommendations 2024

NB: In case of caesarean section, **all the statements refer to situations prior to the start of surgery!**

Recommendation N° 1:

Insufficient epidural labour analgesia with low dose local anaesthetics (i.e., bupivacaine < 0.1% or Ropivacaine <0.175% or equivalent) with lipophilic opioid:

a) An epidural labour analgesia is considered unsatisfactory if the effect is insufficient (insufficient level, insufficient intensity, lateralized or patchy block) or if multiple manual top-up doses have been required.
b) If epidural labour analgesia is insufficient, then replacement of the epidural catheter should be strongly considered.
c) There is no need of an interval before the catheter is replaced (via epidural, combined spinal epidural or dural puncture epidural).

Recommendation N° 2:

Conversion of epidural labour analgesia to epidural anaesthesia for caesarean section

a) In case of unsatisfactory epidural labour analgesia, there should be a low threshold to remove the epidural catheter and perform spinal anaesthesia (or CSEA) for caesarean delivery.
b) In case of non-urgent caesarean section: If 10 ml of higher concentrated local anaesthetics (with or without adjuvants) do not substantially increase motor block, success of epidural anaesthesia for caesarean delivery is unlikely. An alternative technique such as conversion to spinal anaesthesia (or CSEA) should therefore be considered.
c) In urgent (category 1) caesarean section under epidural anaesthesia, it is timesaving to apply the full epidural dose.

Recommendation N° 3:

Failed epidural anaesthesia for caesarean section

a) In case of non-urgent caesarean section (category 2 or higher) and insufficient anaesthesia after a full dose of highly concentrated epidural local anaesthetic (15-25 ml), conversion to spinal anaesthesia (or CSEA) should be considered. However, the risk of high/total spinal is increased and therefore the intrathecal dose (spinal or as CSEA) should be reduced. Simply reinserting a new epidural catheter carries the risk of systemic local anaesthetics toxicity.
b) In case of urgent caesarean delivery (category 1) and insufficient anaesthesia following a full epidural dose, general anaesthesia should be performed unless contra-indicated.

Recommendation N° 4:

Insufficient anaesthesia following spinal anaesthesia for non-urgent caesarean section (category 2 or higher)

a) In the event of a failed spinal: alter patient's position, wait 10 min and assess sacral dermatomes.
b) If there is no evidence of neuraxial block (including in the sacral dermatomes), a repeat spinal anaesthesia with standard doses can be performed.
c) When partial neuraxial block is present (even if limited to sacral dermatomes), reduce the intrathecal local anaesthetics dose of the repeat spinal/CSE or switch to epidural.

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d) Consider using isobaric bupivacaine, especially if a low partial block is present.
e) A repeat spinal should be performed without morphine or other adjuvants (if used in the 1st spinal).
f) A switch to the epidural compartment (epidural or CSE) is recommended, especially in case of partial effect of the 1st spinal injection.
g) In case of elective caesarean delivery another option is to postpone the surgery until complete regression of the block.

These recommendations were presented at the SAOA Meeting Nov 2023 in Lausanne, and were subject to review and comments by all members of the SAOA.
The final version was approved by the board of the SAOA.

Supplementary content can be found in:

Girard T, Savoldelli GL. Failed spinal anesthesia for cesarean delivery: prevention, identification and management. Curr Opin Anaesthesiol. 2024 Jun 1;37(3):207-212. doi: 10.1097/ACO.0000000000001362. Epub 2024 Feb 15. PMID: 38362822; PMCID: PMC11062602.

Desai N, Gardner A, Carvalho B. Labor Epidural Analgesia to Cesarean Section Anesthetic Conversion Failure: A National Survey. Anesthesiol Res Pract. 2019 Jun 2;2019:6381792. doi: 10.1155/2019/6381792. PMID: 31281354; PMCID: PMC6589285.

Li P, Ma X, Han S, Kawagoe I, Ruetzler K, Lal A, Cao L, Duan R, Li J. Risk factors for failure of conversion from epidural labor analgesia to cesarean section anesthesia and general anesthesia incidence: an updated meta-analysis. J Matern Fetal Neonatal Med. 2023 Dec;36(2):2278020. doi: 10.1080/14767058.2023.2278020. Epub 2023 Nov 5. PMID: 37926901.

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