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| 3-11 High central neuraxial block v.1 |
| * Can occur with deliberate or accidental injection of local anaesthetic drugs into the subarachnoid space.
* Symptoms are – in sequence – hypotension and bradycardia – difficulty breathing – paralysis of the arms – impaired consciousness – apnoea and unconsciousness.
* Progression through this sequence can be slow or fast.
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 START.

❶ Reassure the patient – remember that they may be fully aware.

* Plan to ensure hypnosis as soon as clinical situation permits.

❷ Call for help and inform theatre team of the problem.

❸ Treat airway and breathing:

* Give 100% oxygen.
* Chin lift / jaw thrust may suffice.
* Consider supraglottic airway or tracheal intubation (Box A).

❹ Treat circulatory insufficiency:

* Give i.v. fluid by rapid infusion.
* Elevate the legs. Do not use head-down tilt.
* In obstetrics, relieve aorto-caval compression.
* Bradycardia: give atropine or glycopyrrolate (Box B).
* Hypotension: give metaraminol, phenylephrine or ephedrine (Box B).
* CPR may be necessary to circulate drugs.

❺ If the case is obstetric, consider expedited delivery of the baby to manage:

* Risk to mother of unrelieved aorto-caval compression
* Risk to fetus of impaired feto-placental oxygen delivery

❻ Consider other causes that may mimic signs and symptoms, including (Box C):

* Obstetric aorto-caval compression.
* Local anaesthetic toxicity.
* Embolism.
* Vasovagal event.
* Haemorrhage.

❼ Plan ongoing care in a suitable location.

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| Box A: INDUCING ANAESTHESIA |
| * Consider reduced dose of hypnotic drug to avoid further hypotension. A full induction dose will not be necessary if the patient’s consciousness is already impaired.
* Neuromuscular blockade may not be necessary for tracheal intubation if the patient is unconscious, paralysed and apnoeic.
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| Box B: DRUG DOSES |
| Bradycardia:* Atropine: 0.6-1.2 mg
* Glycopyrrolate: 0.2-0.4 mg

Hypotension:* Metaraminol: 1-2 mg boluses repeated
* Phenylephrine: 50-100 μg boluses repeated or by infusion
* Ephedrine: 6-12 mg boluses repeated up to max 30 mg (tachyphylaxis limits further usefulness)
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| Box C: CRITICAL CHANGES |
| * Cardiac arrest → 2-1
* Hypotension → 2-4
* Bradycardia → 2-6
* Local anaesthetic toxicity → 3-10
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