

LOCAL ANAESTHESIA

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Local anaesthetic drugs (Table 23.2) may be used to provide anaesthesia and analgesia, as a sole agent or as adjuncts to general anaesthesia. Available techniques include topical anaesthesia, local infiltration, regional nerve blocks and central neuraxial blocks (spinal and epidural anaesthesia). Local anaesthesia techniques can lead to complications that may be local, such as infection or haematoma, or systemic, as a result of overdose or accidental intravascular injection.

TABLE 23.2 The common local anaesthetic drugs. Name Maximum dose Comments Early onset, short acting, good sensory with adrenaline block [epinephrine] Lidocaine 3 /uni00A0 mg/kg (7 /uni00A0 mg/kg) Bupivacaine 2 /uni00A0 mg/kg Long lasting, more cardiotoxic, must never be used intravenously Prilocaine 6 /uni00A0 mg/kg (9 /uni00A0 mg/kg Least systemic with adrenaline) toxicity, causes methaemoglobinaemia Ropivacaine 3-4 /uni00A0 mg/kg Less cardiotoxic, greater sensory-motor separation Levobupivacaine 2 /uni00A0 mg/kg Isomer of bupivacaine with fewer cardiotoxic properties

dependent and manifest as cardiovascular (cardiac arrhythmia, cardiac arrest) or neurological (depressed consciousness, convulsions). Prilocaine overdose causes methaemoglobinaemia, whereas bupivacaine overdose causes treatment-resistant ventricular arrhythmia and cardiac arrest. The addition of adrenaline (epinephrine) to local anaesthetic solutions hastens onset, prolongs the duration of action and permits a higher upper dose limit. The use of adrenaline is contraindicated in patients with cardiovascular disease, those taking tricyclic and monoamine oxidase inhibitors and in end-arterial locations. Appropriately skilled personnel, resuscitation equipment and oxygen should always be available with local anaesthetic use because of the potential risks of life-threatening complications. LOCAL ANAESTHESIA

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TABLE 23.2 The common local anaesthetic drugs. Name Maximum dose Comments Early onset, short acting, good sensory block [epinephrine]

Name	Maximum dose	Comments
Lidocaine	3 mg/kg (7 mg/kg)	Early onset, short acting, good sensory block [epinephrine]
Bupivacaine	2 mg/kg	Long lasting, more cardiotoxic, must never be used intravenously
Prilocaine	6 mg/kg (9 mg/kg)	Least systemic with adrenaline)
Ropivacaine	3-4 mg/kg	Less cardiotoxic, greater sensory-motor separation
Levobupivacaine	2 mg/kg	Isomer of bupivacaine with fewer cardiotoxic properties

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