Paeds Day Case Surgery

The top priorities in ambulatory anaesthesia are to deal with the four A's: *alertness, ambulation, analgesia and alimentation, otherwise the resulting failure can lead to the unwanted A of admission (unplanned).*

Benefits of Day Surgery

- Fewer emotional and psychological effects than hospitalization (for family, too!)
- Improves efficacy
- More cost effective heath care
- Reduces risk of nosocomial infections
- Less time off school

Disadvantages

- Inability to control factors after discharge
- Parents required to provide nursing

Inclusion categories for day case surgery

Non-medical considerations

- Consent – agreement to day surgery by patient or/and parents
- Care – parents are able to accompany/look after the child on discharge
- Communication – parents are able to access 24 hours help from the hospital via a phone
- Closeness – patients reside within an hour of the hospital

Medical factors

- Healthy child/mild systemic disease or stable chronic disease
- Surgery included on the British Association of Day Surgery directory of day case procedures
- No excessive cardiovascular effects or blood loss
- No excessive postoperative pain anticipated

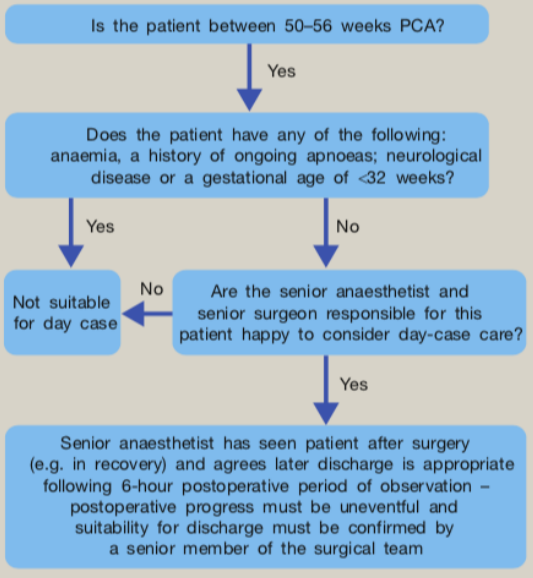
Specific considerations should be in place for age (post-conception) and obesity and all children should have had good preoperative assessments carried out.

Inclusion Criteria Include:

Neonates: term babies at 44 weeks post conceptual age

Ex-Prem: more than 60 weeks PCA (see below)

Management of ex-premature infants between 50 and 56 weeks postconceptional age (PCA) undergoing minor surgery



(kindly reproduced from Navaratnarajah and Thomas 2013)

Obesity: limit is BMI 35kg/m2. Should be worked up pre-op for comorbid conditions

Comorbidities: As long as stable and experienced parents, anaesthetist and surgeon, day case surgery can be considered.

Pre-Operative Preparation

- Healthy child: does not need preop mandatory testing

Fasting

2 hours clear fluids → 50ml hourly, up to theatre is now allowed
4 hours breast milk
6 hours formula & solids
→ adequate hydration means quicker recovery, less irritable and less PONV, therefore limit fasting.

Premedication

- Topical anaesthetic for drip site
- Consider a short-acting agent for only children who are unduly anxious or special considerations
- Consider intranasal midaz 0.2mg/kg which takes 10 minutes
- Clonidine – takes 45 minutes and causes post op drowsiness

Anaesthesia

Theatre – warm and friendly. ☺

Anaesthesia:

Induction & Airway: both IV and inhalational are accepted and neither has greater benefit for PDCS (Paeds day case surgery)
Supraglottic devices (LMA) are favoured. Be cautious in < 6 months.
Maintenance: TIVA nice, but confers no benefit over volatiles.

Analgesia

- "Multimodal approach (with use of LA adjuncts)"
- Counsel parents well on correct use of at home prescription
- Provide contact number if advice needed
- NSAIDs only if > 3 months old
- NSAIDs highly recommended as lower opioid need and PONV
- Codeine not recommended for <12 yrs old
- Avoid use of intra-op opioids, use short acting (fentanyl if needed)

Factors affecting paediatric pain control at home

Child factors
- Refusing to take medicine
- Sleeping when regular medication is due

Parental factors
- Pain assessment difficulties
- Knowledge/education (worried about addiction)
- Culture (stoical behaviours expected)

Medication
- Inadequate formulations (tablets versus suspension)
- Taste
- Ineffective (dose banding not adequate or degree of pain versus analgesic)

Hospital system
- Poor discharge information (no written instructions)
- Access to analgesics (stronger analgesics require ongoing prescription)

Updated Paracetamol Dosing Guidelines

Paracetamol dosing regimes

Oral paracetamol dosing regime

	28–32 weeks PCA	32–52 weeks PCA	3 months–6 years	6–12 years	12–18 years
Maintenance (mg/kg)	10–15 (8–12 hours)	10–15 (6–8 hours)	15–20 (4–6 hours)	15–20 (4–6 hours)	1 g (6 hours)
Daily allowance	30 mg/kg	60 mg/kg	75 mg/kg	75 mg/kg	Max 4 g

Intravenous paracetamol dosing regime

	Preterm neonate >32 weeks PCA	Term neonate and children <10 kg	>10–50 kg	>50 kg
Maintenance dose (mg/kg)	7.5 (8 hours)	10 (4–6 hours)	15 (4–6 hours)	1 (4–6 hours)
Daily allowance	25 mg/kg	30 mg/kg	60 mg/kg	Max 4 g

Discharge Criteria for PDCS

Discharge criteria for day case surgery

- Stable vital signs and conscious level
- Pain controlled, discharge medicines supplied and parents educated in their regular use
- Nausea/vomiting controlled
- Hydration attained (intraoperative fluid, postoperative drink not enforced)
- Passing urine if relevant (post-caudal or penile surgery)
- Wound clean and no bleeding
- Parents happy to take home
- Written information, discharge summary and telephone number supplied