Anesthesia for ambulatory surgery

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Targu Mures, 14 nov 2017

International Association for Ambulatory Surgery (© World Health Organization 2007)

DS	AS, same-day surgery, day only
Extended recovery	23 h, overnight stay, single night
	Treatments requiring an overnight stay before discharge
Short stay	Treatments requiring 24-72 h in hospital before discharge
Office-based surgery	An operation or procedure carried out in a medical surgery/office or practitioner's professional premises, which provide appropriately designed, equipped service room(s) for its safe performance

DS – Day surgery; AS – Ambulatory surgery

Introduction

- Increasing number of complicated surgical patients, with significant or multiple comorbidities
- More painful and invasive surgical procedures:
  - shoulder and total knee arthroplasty
  - mastectomy
  - advanced laparoscopic surgery
- Ambulatory surgery coverage extended to
  - pediatry
  - gynecology
  - interventional radiology for vascular and cardiology procedures.

USA > 70%

Poland < 10%

Rationale

- IF a patient can safely undergo an operation, recover, and go home on the same day
- several potential advantages:
  - decreased costs through more efficient resource utilization,
  - increased hospital bed availability,
  - lower risk of resistant bacterial strain transmission,
  - and quicker return to family, social, and working life.

"More aggressive rehabilitation leads to faster recovery of organ function, fewer surgical and anesthetic complications, reduced mental and physical disability, and, most importantly, earlier resumption of normal activities" . [White PF. Anesth Analg 90: 1234, 2000]

Potential benefits of day-care surgeries

Patients and families

- More personalised care
- Recover in a familiar home environment
- Avoid complications from prolonged hospitalisation (infections, DVT)
- Continue with routine medications
- Low complication rates
- Better outcomes
- High patient satisfaction

Hospitals

- Cost - 25–75% lesser than that of a similar inpatient procedure
- Reduced requirement of nursing and medical supervision
- Ease of scheduling for patients and surgeons
- More number of patients can be treated

Eligibility criteria

- Minimal risk of major post-operative complications:
  - haemorrhage
  - cardiovascular instability
- No requirement of prolonged specialist post-operative care or observation
- Abdominal and thoracic cavities should only be opened with minimally invasive techniques

Eligibility criteria

- **Post-operative pain** is amenable to oral analgesics ± regional anaesthetic techniques
- **Rapid resumption of normal functions** (oral nutrition, early and safe mobilisation)
- **Anaesthesia-related side effects** delaying discharge must be **minimal** (post-operative nausea, vomiting, drowsiness, urinary retention etc.).

Eligibility criteria

- a responsible adult should accompany patient when discharged at home and remain with him for 24 h after surgery.
- travelling time to home <1 h
- access to a telephone
- telephonic contact with patients for pre-operative interview and to avoid cancellations of scheduled surgeries.
- Patients living conditions: sanitation facilities , overcrowding etc.

Eligibility criteria

- An understanding of the process and an ability to follow discharge instructions.
- The patient's place of residence for post-surgery care being within easy access to the surgical facilities.
- Physical status of ASA I, II or medically stable ASA III patients. Physical status alone does not dictate acceptability.
- Younger infants, only if the units have particular paediatric experience

Eligibility

- morbid obesity ???

Davies et. al. Anaesthesia 56: 1112, 2001

- obstructive sleep apnea ?????

Sabers C et al. Anesth Analg 96: 1328, 2003

- ASA III ?????

Dunn PF. Clinical Anesthesia Procedures of the Massachusetts General Hospital, 7th ed. LWW (Philadelphia) p. 563, 2007

Procedures That May Be Safely Performed in Outpatients with Obstructive Slep Apnea

ANESTHESIOLOGY
The Journal of the American Society of Anesthesiologists, Inc.

From: Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea:A Report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea

Anesthes. 2006;104(5):1081-1093.

Table 3. Consultant Opinions Regarding Procedures That May Be Performed Safely on an Outpatient Basis for Patients at Increased Perioperative Risk from OSA

Type of Surgery/Anesthesia	Consultant Opinion
Superficial surgery/local or regional anesthesia	Agree
Superficial surgery/general anesthesia	Equivocal
Airway surgery (adult, e.g., UPPP)	Disagree
Tonsillectomy in children less than 3 years old	Disagree
Tonsillectomy in children greater than 3 years old	Equivocal
Minor orthopedic surgery/local or regional anesthesia	Agree
Minor orthopedic surgery/general anesthesia	Equivocal
Gynecologic laparoscopy	Equivocal
Laparoscopic surgery, upper abdomen	Disagree
Lithotripsy	Agree

OSA = obstructive sleep apnea; UPPP = uvulopalatopharyngoplasty.

Exclusion Criteria for Outpatient Surgery

All Patients

- Major blood loss
- Major surgery
- ASA III or IV and requiring complex or long-duration monitoring postoperatively
- Morbidly obese patients who have OSA (OSA alone not a contraindication, see above)
- Any patient with recent Upper Respiratory Infection

Infants

- < 56 weeks postconceptual age and < 32 weeks postgestation when born (56:32)
- < 54 weeks postconceptual age and < 35 weeks postgestation when born (54:35)
- History of apnea
- Cardiovascular disease
- Anemia

ASA Guidelines: Fasting Recommendations to Reduce the Risk of Pulmonary Aspiration

- Clear liquids: 2 hrs
- Breast milk: 4 hrs
- Infant formula, non-human milk, or light meal: 6 hrs
- Long-acting insulin (ex. Lantus) should be taken at 1/2 dose on the morning of surgery, with medium and short-acting insulins held.
- Consider placing an antecubital IV as it diminishes the pain associated with propofol.
- Concomitent medication

World Health Organization

SURGICAL SAFETY CHECKLIST (FIRST EDITION)

Before induction of anaesthesia ▸▸▸▸▸▸▸▸▸ Before skin incision ▸▸▸▸▸▸▸▸▸▸▸▸▸ Before patient leaves operating room

SIGN IN

- ☐ **PATIENT HAS CONFIRMED**
  - IDENTITY
  - SITE
  - PROCEDURE
  - CONSENT
- ☐ **SITE MARKED/NOT APPLICABLE**
- ☐ **ANAESTHESIA SAFETY CHECK COMPLETED**
- ☐ **PULSE OXIMETER ON PATIENT AND FUNCTIONING**

DOES PATIENT HAVE A:

KNOWN ALLERGY?
- ☐ NO
- ☐ YES

DIFFICULT AIRWAY/ASPIRATION RISK?
- ☐ NO
- ☐ YES, AND EQUIPMENT/ASSISTANCE AVAILABLE

RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)?
- ☐ NO
- ☐ YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED

TIME OUT

- ☐ **CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE**
- ☐ **SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM**
  - PATIENT
  - SITE
  - PROCEDURE

ANTICIPATED CRITICAL EVENTS

- ☐ **SURGEON REVIEWS:** WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?
- ☐ **ANAESTHESIA TEAM REVIEWS:** ARE THERE ANY PATIENT-SPECIFIC CONCERNS?
- ☐ **NURSING TEAM REVIEWS:** HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?

HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?
- ☐ YES
- ☐ NOT APPLICABLE

IS ESSENTIAL IMAGING DISPLAYED?
- ☐ YES
- ☐ NOT APPLICABLE

SIGN OUT

NURSE VERBALLY CONFIRMS WITH THE TEAM:

- ☐ **THE NAME OF THE PROCEDURE RECORDED**
- ☐ **THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT** (OR NOT APPLICABLE)
- ☐ **HOW THE SPECIMEN IS LABELLED** (INCLUDING PATIENT NAME)
- ☐ **WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED**
- ☐ **SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT**

THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE. ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED.

Anesthesia Techniques
General Anesthesia

- Propofol is the IV induction agent of choice
- avoid etomidate as an IV induction agent because it increases the incidence of PONV and myoclonus is potentially painful.
- consider using TIVA with propofol - reduces the incidence of PONV by 19% compared to volatile anesthetics *Apfel CC et. al. NEJM 350: 2441, 2004*
- LMA causes less postoperative discomfort than endotracheal intubation

  Stoelting RK. Basics of Anesthesia, 5th ed. Elsevier p. 544, 2007
- maintenance –TIVA with Propofol better than nitrous oxide + volatile anesthetic
- most insoluble inhalational anesthetics available: desflurane or sevoflurane

General anesthesia

- Remifentanil continuous infusions 0.05 – 0.20 µg / kg / min
- avoid succinylcholine - potential for myalgias
- Rocuronium or mivacurium - alternative. If uccinylcholine is given, always give a defasciculating dose of a non-depolarizing NMBD first.
- Sugammadex - cyclodextrin compound -rapidly reverse steroid-based, non-depolarizing neuromuscular blockade

Neuraxial blockade

- 25 gauge or higher needles plus pencil-point needle reduces the incidence of post-dural puncture headache.
- There is significant debate about early ambulation and headaches.
- 5-10% of outpatients who undergo a spinal will develop a post-dural puncture headache and that men may develop urinary retention.

Dunn PF. Clinical Anesthesia Procedures of the Massachusetts General Hospital, 7th ed. LWW (Philadelphia) p. 566, 2007

- Epidural analgesia is a reasonable alternative to spinal in some procedures

There is a necessity to optimize the administration of drugs in order to meet the patient's individual needs

Amnesia, Unconsciousness

Antinociception

Immobility

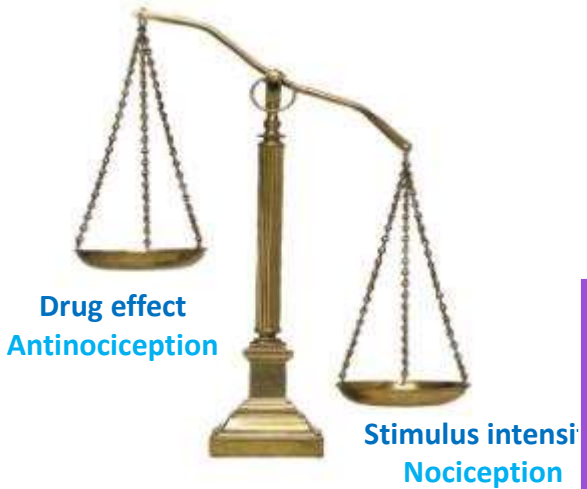
Autonomic stability

Quantitative measurement of neuromuscular transmission

General anesthesia

- Opioid sparing:
  - non-steroidal anti-inflammatory drugs (NSAIDs)
  - cycloxygenase-2 (COX-2) inhibitors
  - intravenous acetaminophen
  - glucocorticoids
  - alpha-2-agonists
  - local anesthetics
  - ketamine

Nociception - antinociception balance of the patient



Results of nociception-antinociception imbalance

Excessive opiate medication	Lacking opiate medication
• Post-operative nausea and vomiting (PONV) • Paralysis of bowel • Acute opiate intolerance • Breath depression • Drowsiness (sedation)	• Movement • Hypertension • Tachycardia • Tearing • Sweating • Heart ischemia

Multimodal analgesia for ambulatory surgery

1. A multimodal pain management strategy has become the gold standard appproach

2. Involves administering a combination of opioid and nonopioid analgesics that act at different sites

3. Adaptation of multimodal analgesic techniques is one of the keys to improving the recovery process after day-case surgery

4. Many patients undergoing ambulatory surgery continue to experience unacceptably high levels of pain after their operation

Anesthesiology Clin 28 (2010) 217-224

Multimodal analgesia for ambulatory surgery

- **the use of convntional opioid-based intravenous patient controlled analgesia and central neuraxial analgesia techniques are simply but not practical on an ambulatory basis**

- **this patient population requires an aggressive perioperative analgesic regimen that provides:**

1. **effective pain relief**
2. **has minimal side effects**
3. **is intrinsically safe**
4. **can be managed by the patient and their family members away from a hospital or surgical center.**

Multimodal analgesia for ambulatory surgery

Definition:

- **multimodal analgesia refers to systemic administration of analgesic drugs with different mechanisms of action**

- **in other situations it refers to concurrent application of analgesic pharmacotherapy in combination with regional analgesia.**

Anesthesiology Clin 28 (2010) 217-224

Options for Multimodal Analgesia Techniques

- **Acetaminophen, NSAIDs or COX-2-specific inhibitors, and regional analgesia techniques.**

- **Nonopioid analgesics may be supplemented with oral opioids (eg, hydrocodone, oxycodone, and tramadol).**

- **There is increased interest in using analgesic adjuncts**

White PF. Curr Opin Investig Drugs 2007;8:517–8.

Srivastava U, Kumar A, Saxena S, et al. Eur J Anaesthesiology 2010;27:331–5

Sen H, Sizlan A, Yanarates O, et al. Anesth Analg 2009;109:1645–50

ACETAMINOPHEN

- **Acetaminophen is a weak analgesic and may not be adequate as a sole analgesic, it may be combined with NSAIDs**

- **Acetaminophen is devoid of some of the side effects of nonselective NSAIDs**

- **The initial dose of injectable acetaminophen may be administered intraoperatively followed by an oral administration after discharge**

Acetaminophen iv recommended doses of 15 mg/kg in children and 1 gm in adults,

Duggan ST, Scott LJ. Drugs. 2009;69:101–13

po adult dosing 650-1000 mg up to 4 times a day

po pediatric dosing 15 mg /kg up to 4 times a day

NSAID`s

- **NSAIDs should not be used:**
  - **in patients with preexisting coagulation defects or those undergoing certain surgical procedures**
  - **in patients with preexisting renal dysfunction, myocardial dysfunction, or end-stage liver disease.**
- **NSAIDs should be used with caution in the elderly.**
- **NSAIDs including the selective COX-2 inhibitors can be given preoperatively.**

Derry S, Moore RA. Cochrane Database Syst Rev.2013;10:CD004233.

Acetaminophen + NSAIDs

Anesthesiology.2011;115:575–88
Combining paracetamol (acetaminophen) with nonsteroidal anti-inflammatory drugs:meta-analyses of randomized controlled trials.
Authors: Ong CK, Seymour RA, Lirk P, Merry AF.

21 randomised controlled trials that showed the NSAIDs/acetaminophen combination to be superior to acetaminophen alone in 17 out of 20 trials (85 %),

Evidence: **35 %** reduction in pain intensity
38.8 % reduction in analgesia supplementation.

ADJUVANTS

Clonidine

- can be administered orally, intravenously, neuraxially or perineurally in combination with local anesthetics.
- at low doses (2 µg/kg), it was shown to increase the duration of perineural blockade.

Ketamine

- is shown to reduce opioid-induced hyperalgesia and the incidence of persistent postsurgical pain.
- optimal dose remains unknown, bolus doses of 0.2–0.5 mg/kg and infusions of 0.1–0.2 mg/kg/h have been reported

Joshi GP, Rapid recovery from ambulatory surgery: the new paradigm in ambulatory anesthesia. IARS Review Course Lectures, May 2013

ADJUVANTS

Gabapentinoids

- **The use of gabapentinoids should be patient and procedure specific.**

- **They are probably more suited for anxious patients with preoperative chronic pain and to surgical procedures known to have a high incidence of persistent postoperative pain**

  Ghai A, Gupta M, et al. Anaesth Pain Intensive Care 2012;16:257–61.

- **Gabapentinoids may also play a role in preventing central sensitisation. Patients undergoing lumbar discectomy who received pregabalin perioperatively had less pain at three months**

  Burke SM, Shorten GD. Anesth Analg. 2010;110:1180–5.

Options for Multimodal Analgesia Techniques

Local anesthetics via alternative routes

- **intranasal lidocaine in combination with naphazoline decreased both intra- and postoperative pain**

  Kaba A, Laurent SR, Detroz BJ, et al. Anesthesiology 2007;106:11–8

- **perioperative administration of intravenous lidocaine could improve early postoperative pain control and reduce surgery-induced immune alterations.**

  Yardeni IZ, Beilin B, Mayburd E, et al. Anesth Analg 2009;109:1464–9.

- **ropivacaine with morphine and ketorolac for prolongation of intra-articular local anaesthesia (after arthroscopy): ropivacaine 150 mg, morphine 4 mg, and ketorolac 30 mg in 30 ml saline dilution**

Peripheral Nerve Blocks for Ambulatory Surgery

- **Regional techniques include single shot perineural injections and continuous local anesthetic infusions via perineural catheters**

- **Shoulder surgery can be managed with an effective interscalene brachial plexus block. Possible side effects - phrenic nerve paralysis**

Gordon MA, Shaw PM et al.Anesth Analg.2010;111:617–23

- **For day case shoulder surgery, a low volume (5 ml versus the traditional 20–30ml), ultrasound-guided interscalene block will decrease phrenic nerve involvement while providing adequate analgesia upto 6 h postoperatively**

Falco L, de Castro MV et al,. Br J Anaesth. 2013;110:450–5

- **Supraclavicular brachial plexus blocks are a reasonable analgesic alternative and carry slightly less risk of diaphragm paraesis**

Peripheral Nerve Blocks for Ambulatory Surgery

- **Forearm and hand surgery**

  Anesthesia with 2 % lidocaine in the axilla can be supplemented with peripheral long-acting local anesthetic blocks targeting individual nerves under ultrasound guidance

- **Paravertebral blockade**

  in breast surgery has gained in popularity due to ultrasound guidance

  O'Riain SC, O'Donnell BO, Cuffe T, et al. Anesth Analg. 2010;110:248–51

- **The transversus abdominis plane (TAP) block**

  provides effective analgesia to the lower abdomen and inguinal region.

  De Oliveira GS, Castro-Alves LJ,et al. Anesth Analg.2014;118:454–63

Lower limb surgery

- **Ambulation is considered safe when performing lower limb blocks**
- **Femoral nerve blocks are excellent at providing analgesia to the inner thigh and knee, but the motor block of the knee extensors may contribute to falls.**

Kim DH, Goytizolo AE, Kahn RL,et al. Anesthesiology. 2014;120:540–50

- **More peripheral blocks have evolved:**
  - adductor canal blockade of the saphenous nerve
  - infrapatellar nerve block

- **Sciatic nerve blocks proximal approaches will cause significant leg weakness, whereas blockade at 10–12 cm above the popliteal fossa, provides analgesia to the lower leg while permitting ambulations**

O'Donnell BD, Iohom G. Curr Opin Anesthesiol.2008;21:723–8

Adjuncts to Single-Shot Nerve Blocks

- **Single-shot nerve blocks with available long-acting local anesthetics provide upto 16 h of analgesia**

- **Dexamethasone in perineural administration increases median sensory block duration by 37%**

Desmet M, Braema H, Reynvoet M, et al. Br J Anaesth. 2013;111:445–52

- **Perineural dexamethasone concentration of 66 µg/ml and systemically administered dexamethasone upto a maximum 4mg**

Williams BA, Schott NJ et al. Anesth Analg. 2014;118:912–4

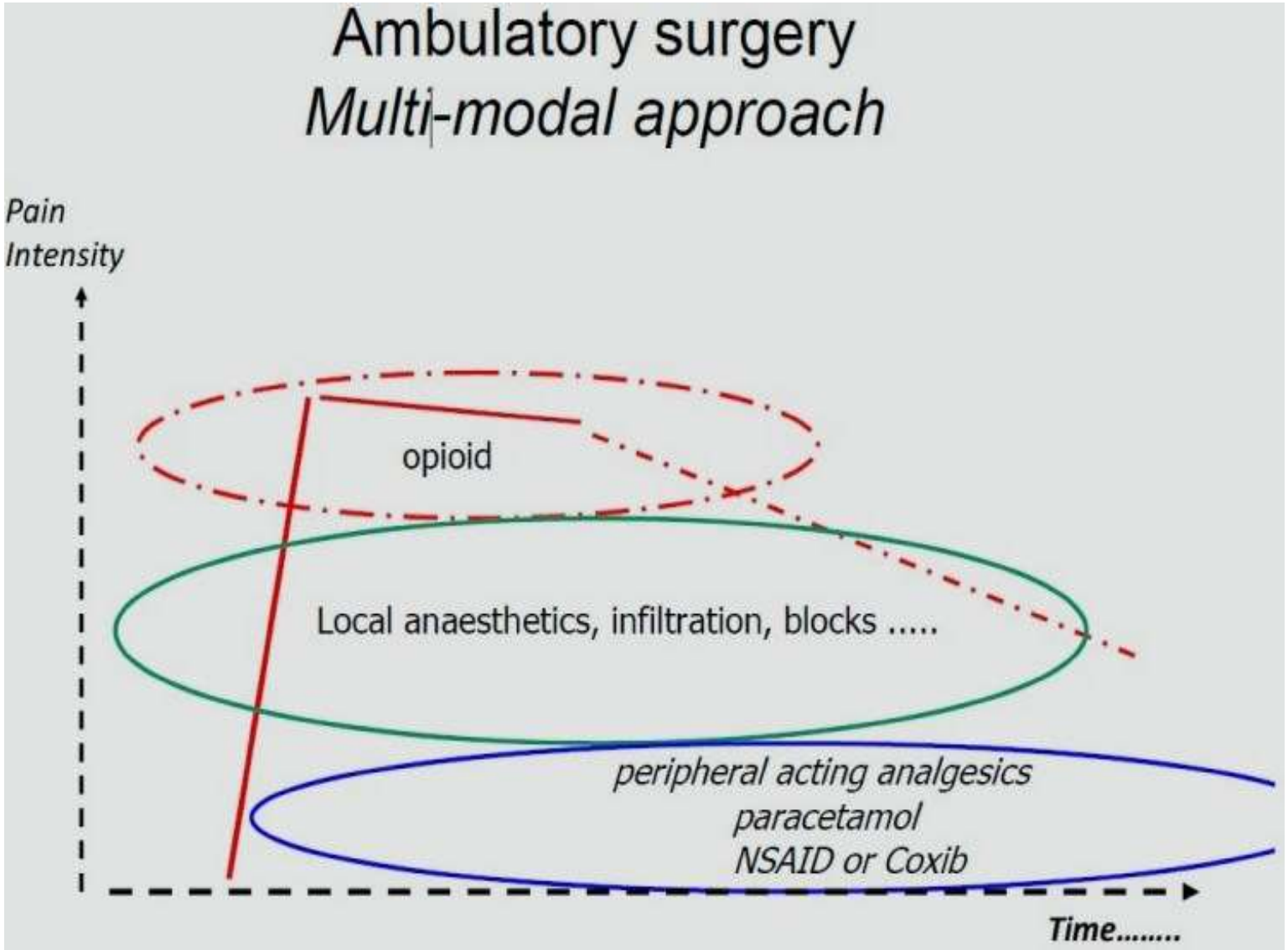
- **Perineural clonidine at doses of 100–150 µg prolongs the duration of sensory blocks by up to 100 min**

Infiltration of the surgical wound

- **With local anesthetics is a simple and effective technique**
- **Fast-acting anaesthesia prior to incision and long-acting anaesthesia at skin closure, reduce the pain intra as well as postoperatively**
- **The duration of analgesia can be increased by local anesthetic infusion through a catheter placed in the layers of the skin**
- **The continuous local anesthetic infusion has been successfully used in patients undergoing superficial surgical procedures**

Gupta A. Curr Opin Anaesthiol. 2010;23:708–13

Multimodal analgesia for ambulatory surgery

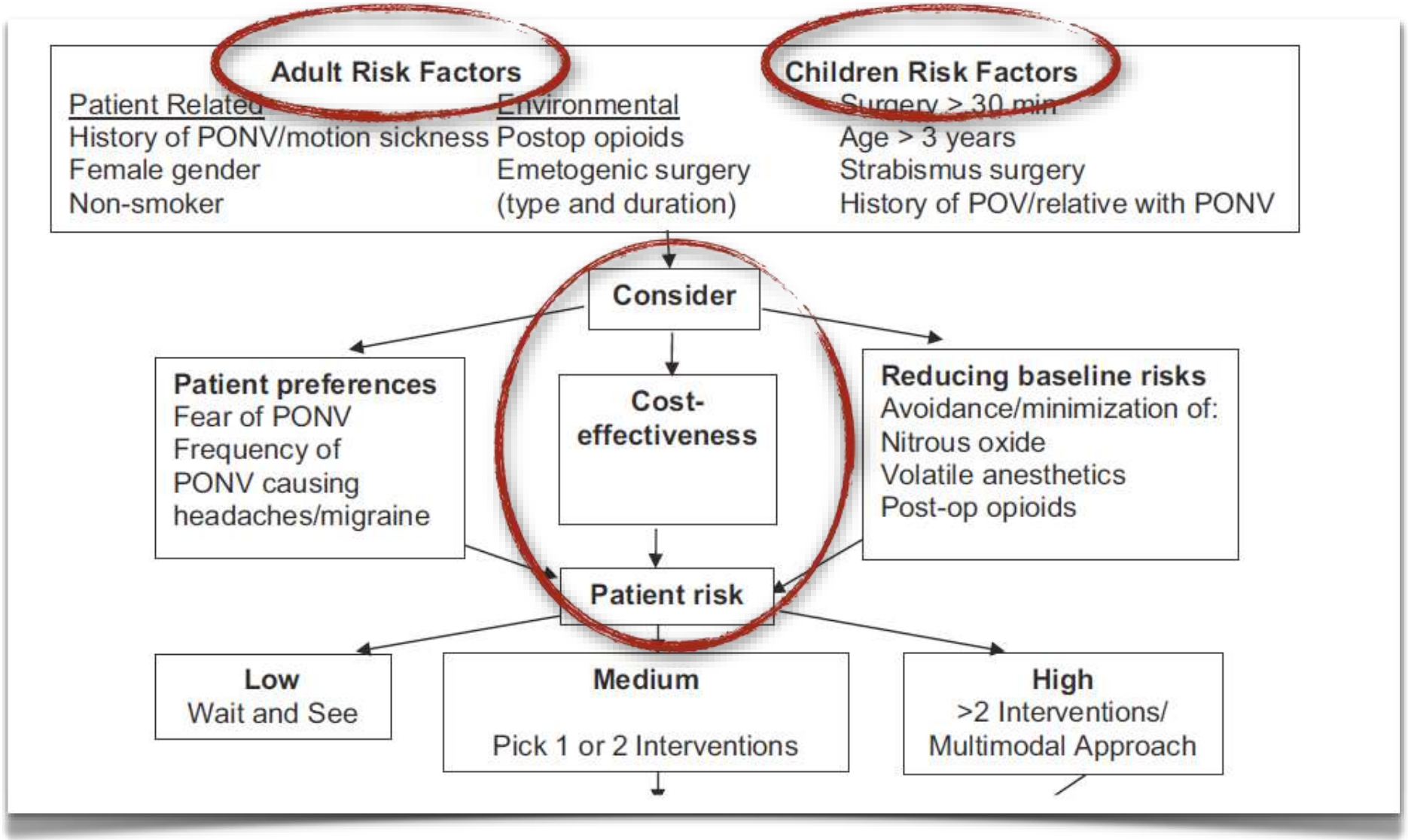


CME

Consensus Guidelines for the Management of Postoperative Nausea and Vomiting

Tong J. Gan, MD, MHS, FRCA,* Pierre Diemunsch, MD, PhD,† Ashraf S. Habib, MB, FRCA,* Anthony Kovac, MD,‡ Peter Kranke, MD, PhD, MBA,§ Tricia A. Meyer, PharmD, MS, FASHP,‖ Mehernoor Watcha, MD,¶ Frances Chung, MBBS,# Shane Angus, AA-C, MS,** Christian C. Apfel, MD, PhD,†† Sergio D. Bergese, MD,‡‡ Keith A. Candiotti, MD,§§ Matthew TV Chan, MB, BS, FANZCA,‖‖ Peter J. Davis, MD,¶¶ Vallire D. Hooper, PhD, RN, CPAN, FAAN,## Sandhya Lagoo-Deenadayalan, MD, PhD,*** Paul Myles, MD,††† Greg Nezat, CRNA, CDR, USN, PhD,§§§ Beverly K. Philip, MD,‖‖‖ and Martin R. Tramèr, MD, DPhil¶¶¶

The present guidelines are the most recent data on postoperative nausea and vomiting (PONV) and an update on the 2 previous sets of guidelines published in 2003 and 2007. These guidelines were compiled by a multidisciplinary international panel of individuals with interest and expertise in PONV under the auspices of the Society for Ambulatory Anesthesia. The panel members critically and systematically evaluated the current medical literature on PONV to provide an evidence-based reference tool for the management of adults and children who are undergoing surgery and are at increased risk for PONV. These guidelines identify patients at risk for PONV in adults and children; recommend approaches for reducing baseline risks for PONV; identify the most effective antiemetic single therapy and combination therapy regimens for PONV prophylaxis, including nonpharmacologic approaches; recommend strategies for treatment of PONV when it occurs; provide an algorithm for the management of individuals at increased risk for PONV as well as steps to ensure PONV prevention and treatment are implemented in the clinical setting. (Anesth Analg 2014;118:85–113)


Adult Risk Factors
Patient Related
History of PONV/motion sickness
Female gender
Non-smoker
Environmental
Postop opioids
Emetogenic surgery
(type and duration)
Children Risk Factors
Surgery > 30 min
Age > 3 years
Strabismus surgery
History of POV/relative with PONV
Consider
Patient preferences
Fear of PONV
Frequency of
PONV causing
headaches/migraine
Cost-
effectiveness
Reducing baseline risks
Avoidance/minimization of:
Nitrous oxide
Volatile anesthetics
Post-op opioids
Patient risk
Low
Wait and See
Medium
Pick 1 or 2 Interventions
High
>2 Interventions/
Multimodal Approach

Post Operative Nausea and Vomiting risk

- Prophilactic treatment (≥ 2 risk factors):
  - low-dose **droperidol: 0.625 mg IV**
  - **dexamethasone: 4–8 mg IV**
  - 5-HT_3 antagonist: **ondansetron 4 mg I**V
- Minimizing PONV risk:
  - propofol
  - adequate hydration
  - opioid-sparing techniques
  - beta blockers and alpha-2-agonists
  - Ketorolac
- Non-pharmacologic techniques
  - acupuncture
  - transcutaneous electrical nerve stimulation
  - acupressure

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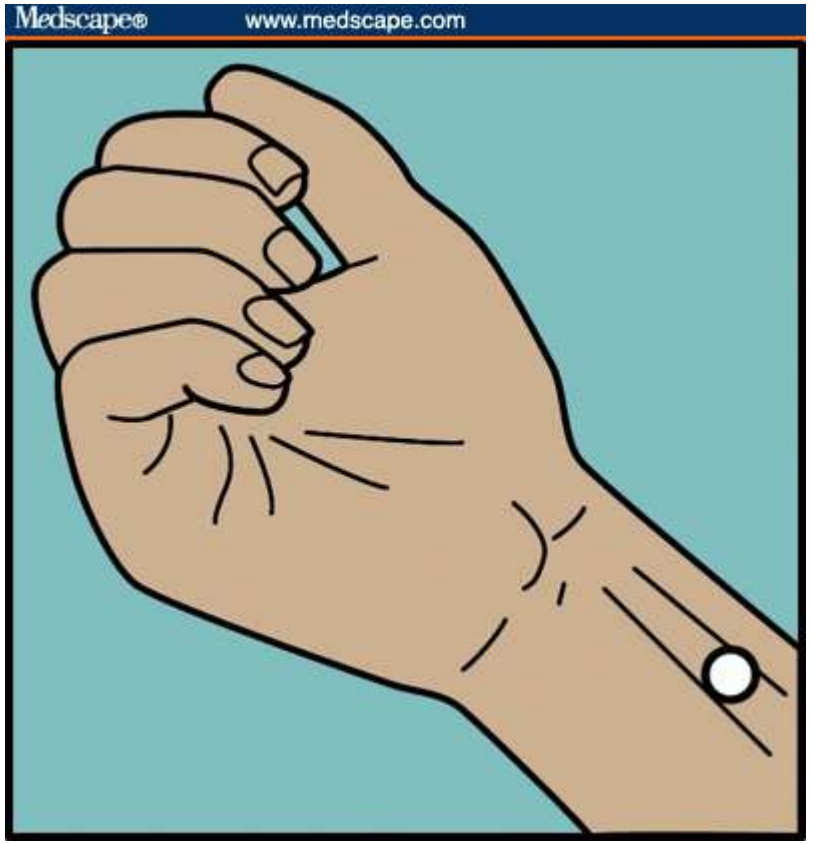

Postoperative ileus and constipation

- opioid-sparing intravenous techniques
- minimally invasive surgical techniques
- multimodal analgesic techniques
- early oral feeding and early ambulation
- avoidance of excess fluid
- peripheral mu-opioid receptor antagonists (alvimopan, methylnaltrexone)
- non-opioid analgesic pain management plan after discharge

Discharge

- Nursing variability is the single most important factor in discharge from an outpatient facility
- PONV, Pain and drowsiness are the most common reasons for prolonged stay in the PACU
- Urinary retention is also a concern.
- Rate of unplanned admission is < 1%.
- Always explain to patients that manual dexterity may be impaired for as long as 48 hours after surgery.

The WAKE© Score: Patient-Centered Ambulatory Anesthesia and Fast-Tracking Outcomes Criteria

Williams, Brian A. MD, MBA; Kentor, Michael L. MD

International Anesthesiology Clinics: July 2011 - Volume 49 - Issue 3 -
doi: 10.1097/AIA.0b013e3182183d05
Patient-Centered Measurements of Success

Zero Tolerance Criteria

- *No Nausea, No Vomiting*
- *"No Pain"*
- *No Shivering, No Itching*
- *Not Lightheaded when sitting upright*

WAKE Score "0-10" Criteria:

Blood Pressure / Heart Rate	2 – 1 – 0
Movement	2 – 1 – 0
Mental Status	2 – 1 – 0
Respiratory	2 – 1 – 0
O_2 Saturation	2 – 1 – 0

Score of 8+ needed

- *Recovery Discharge*
- *Recovery Room Bypass*

Discharge authorised by a member of the medical team or trained nurse

Vital signs stable

Orientated to time, place and person

Passed urine (if applicable)

Able to dress and walk (where appropriate)

Oral fluids tolerated (if applicable)

Minimal pain

Minimal bleeding

Minimal nausea/vomiting

Cannula removed

Responsible escort present

Has care taker for 24 h postoperatively

Written and verbal post-operative instructions provided

Knows who to contact in an emergency

Follow-up appointment entered

Follow-up appointment date given for suture removal

Referrals done if required

Sickness certificate provided

Given take-home medication (especially analgesics) with information leaflet

Information given on when to resume other regular medications

Instructions regarding driving and alcohol consumption

Cursul Internațional de Ghiduri și Protocoale în Anestezie Terapie Intensivă și Medicină de Urgență

27-29 septembrie 2018

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