ROLE OF THE ANESTHETIST IN ORGANIZING AMBULATORY SURGERY

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- Conflicts of interest?
  
  I am an anesthesiologist...
TRADITIONAL ROLE OF THE ANESTHESIOLOGIST
EVOLVING FUNCTION OF THE ANESTHESIOLOGIST

- FROM:
  silent supporter of the surgeon in the operating room

- TO:
  patient guardian in the perioperative period
  “The internal medicine specialist of the surgical event”

Euroanaesthesia Geneva June 3-5: keynote address Prof Monty Mythen: Perioperative Medicine – do we have the training to cope with increasing demands?
FUNCTIONS OUTSIDE THE OR

- Sedation for diagnostic and therapeutic internal medicine procedures
- Idem for radiological procedures
- Labor and delivery
- Pain treatment
- Emergency medicine
- Critical care medicine
- Palliative care
Administrative functions
  • In the own department
  • Operating Room (OR) management
  • Member of the medical council
  • Member of many steering groups in the hospital
    Patient safety
    Infection prevention
    OR committee
    ...

- Hospital medical director

- Day surgery facility management
ROLE OF THE ANESTHESIOLOGIST IN THE ASU

- Traditional anesthetic services

- Preoperative assessment – patient optimization

- Organizational aspects
  • Anesthetic protocols
  • Patient selection criteria
  • Procedure selection
  • Discharge criteria
Crucial element for safe ambulatory surgery!

- Local vs. Locoregional vs. General anaesthesia
- ASA class I and II, also III (and IV ?)
- Age: lower / upper limit
- Body weight
- Psycho-social context: motivation, patient escort, home situation, distance to emergency station, access to telephone
- Concomitant diseases: diabetes, COPD, sleep apnoea, …
PATIENT SELECTION

- Significant predictors of morbidity or mortality after same-day surgery - 250,000 patients
  American College of Surgeons National Surgical Quality Improvement Program

  • Chronic obstructive pulmonary disease (COPD)
  • History of cerebrovascular accident (CVA) or transient ischemic attack (TIA)
  • Obese body mass index (BMI > 30, 92 kg for 1.75 m)
  • Previous percutaneous coronary intervention (PCI)/cardiac surgery
  • Prolonged operative time
  • Hypertension
  • Overweight BMI (25 – 30, 76 kg for 1.75 m)

<table>
<thead>
<tr>
<th>Morbidity Type</th>
<th>Specific Morbidity</th>
<th>Frequency by Postoperative Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intraoperative morbidities</td>
<td>Intraoperative occurrence—cardiac arrest requiring CPR</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td></td>
<td>Intraoperative occurrence—myocardial infarction</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>Postoperative occurrences—surgical</td>
<td>Deep surgical site infection</td>
<td>0 0 1 1</td>
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<tr>
<td></td>
<td>Organ-space surgical site infection</td>
<td>0 2 0 2</td>
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<tr>
<td></td>
<td>Wound disruption</td>
<td>7 13 5 25</td>
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<tr>
<td>Postoperative occurrences—anesthetic</td>
<td>Unplanned intubation</td>
<td>30 5 2 37</td>
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<td></td>
<td>On ventilator &gt;48 h</td>
<td>1 0 1 2</td>
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<tr>
<td>Postoperative occurrences—medical</td>
<td>Pneumonia</td>
<td>1 16 29 46</td>
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<tr>
<td></td>
<td>Pulmonary embolism</td>
<td>0 3 4 7</td>
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<tr>
<td></td>
<td>Progressive renal insufficiency</td>
<td>0 1 5 6</td>
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<tr>
<td></td>
<td>Acute renal failure</td>
<td>1 0 3 4</td>
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<tr>
<td></td>
<td>Stroke/CVA with neurologic deficit</td>
<td>3 6 6 15</td>
</tr>
<tr>
<td></td>
<td>Cardiac arrest requiring CPR</td>
<td>6 1 1 8</td>
</tr>
<tr>
<td></td>
<td>Myocardial infarction</td>
<td>7 3 5 15</td>
</tr>
<tr>
<td></td>
<td>Bleeding requiring transfusion</td>
<td>8 7 6 21</td>
</tr>
<tr>
<td></td>
<td>Graft/prosthesis/flap failure</td>
<td>1 2 2 6</td>
</tr>
<tr>
<td></td>
<td>DVT/thrombophlebitis</td>
<td>3 1 6 10</td>
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<tr>
<td></td>
<td>Sepsis</td>
<td>2 3 14 19</td>
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<tr>
<td></td>
<td>Septic shock</td>
<td>2 3 5 10</td>
</tr>
<tr>
<td>Mortality</td>
<td>Postoperative death within 72 h</td>
<td>9 7 5 21</td>
</tr>
</tbody>
</table>

CPR = cardiopulmonary resuscitation; CVA = cerebrovascular accident; DVT = deep venous thrombosis; NSQIP = National Surgical Quality Improvement Program; POD = postoperative day.
PROCEDURE SELECTION

- Minimal physiologic derangements
- Minimal blood loss - low complication rate
- Duration of the surgery (Recovery-time, complication rate)
- Minimal or readily controllable postoperative pain
- Simple postoperative care

- Taking into account
  • The experience of the surgeon
  • The infrastructure of the ASU

- No specific list of procedures!
MEDICAL MANAGEMENT OF THE ASU

- In Belgium: ASU-director must be an anesthetist or a surgeon

- Responsible for all organizational aspects of the ASU

- In close cooperation with the head nurse: management team
THE ANESTHETIST AS MEDICAL DIRECTOR OF THE ASU

- Anesthesia plays crucial role in successful ambulatory surgery
- Anesthetists are long-time leaders in patient safety
- Trained in standardization of practice

- Extensive cross-disciplinary knowledge
- Long tradition of cooperation with other departments in the hospital
- High ability to bridge competing interests

- Fulltime presence in the unit
THE ANESTHETIST AS MEDICAL DIRECTOR OF THE ASU

- Consult with surgeons
- Consult with anesthesia director (or external anesthesia provider)
- Consult with nursing team
- Contacts with hospital direction or administrative manager
COOPERATION WITH SURGICAL DEPARTMENT

- Discuss procedure selection

- Reconcile the diverging needs of the different surgeons
  - Neutral position of the anesthetist!

- Slot allocation: specialist groups / individual surgeons
  - Based on continuous recording of actual OR time-utilization
    - Mean OR occupation
    - Variability of OR occupation
    - Wasted time (timely start, turnaround time between operations)
COOPERATION WITH ANESTHESIA DEPARTMENT

- Patient selection criteria
- Preoperative clinic (what, when, where)
  • Proven effectiveness
  • Not a battery of medical tests!
- Anesthesia protocols
- Postoperative pain control
- Postoperative nausea and vomiting prevention
- Discharge criteria

- Adequate staffing: stable, fixed anesthesia personnel

ANESTHESIA FOR AMBULATORY SURGERY IS NOT SEXY?

- Young anesthetists more attracted to
  - Cardio-thoracic or neurosurgical or ... anesthesia
  - Critical care medicine
  - Emergency care
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- But: anesthesia for outpatient surgery is no inferior anesthesia!
SELECTING THE RIGHT ANESTHETIST

- Focused on patient safety – teamwork – efficiency – turnover
- Ready to adhere to strict protocols
- Good knowledge of local / regional anesthetic techniques
- Special attention to
  • Pain, PONV, …
  • Thinking about the discharge before the start of anesthesia
- Strongly patient-minded

- On the other hand
  • No weekends, no night calls
  • Collegial environment, close collaborative team
Main indicators in a value-based reimbursement world:

quality of care, patient safety, clinical outcome

→ physician leadership is becoming increasingly important
QUALITY ASSURANCE

- Patient safety
- Evidence-based health care
- Clinical practice guidelines and clinical pathways
  • Anesthesia
  • Surgical procedures
  • Nursing
- Clinical performance indicators: definition and follow-up
  • Process indicators (anesthesia, surgery, day surgery unit)
  • Outcome indicators
- Supervision of accreditation process
PERFORMANCE OPTIMIZATION

- IT-based OR planning
  - In real-time from the surgeon’s office
  - Linked to the surgeon’s OR slots
  - Linked to postop holding bed reservation

- Patient tracking
  - Manual
  - Automatic, e.g. WiFi-based

- OR-utilization follow-up
  - Real-time
  - Trimestral report to direction and individual surgeons
  - Basis for granting operating room slots
COLLECTED DATA

- Arrival in hospital
- Premedication
- Call to ward
- Arrival in preop-holding
- Arrival in OR
- Arrival in induction room
- Incision
- End of wound closure
- Leaving OR
- Leaving recovery room
- Leaving hospital
- Patient id
- Age
- Residence
- Procedure ICD10
- Surgeon
- Anesthetist
- Type of anesthesia
- OR n°
HUMAN RESOURCES MANAGEMENT

- Close cooperation between the medical and nursing director and the surgeons, anesthetists, nursing personnel
  - Reporting to the surgeons active in the unit
  - Regular discussion with head nurse / nursing reps

- Optimal performance if the day-surgery unit has its own administrative infrastructure to manage patient flows and scheduling

- Collaborate and lead as a team
- Multiskilled approach (OR, recovery, ward)

  • Improves the efficiency of the day-surgery unit
  
  • Increased job satisfaction
    Interesting and varied job → low rate of staff turnover
  
  • Flexibility of the workforce to cover sickness and absence in a smaller group
  
  • Better patients and doctors satisfaction because staff are familiar with the entire patient experience
LEADERSHIP

- Defines the success of the ASU

- Needs an experienced manager
  • Day-to-day responsibility for providing efficient, high-quality day-surgery services
  • High level of communication

- Formal training required
- Anesthesiologists
  • Little dedicated training in ASU-specific aspects of anesthesia
  • No preparation for leading administrative tasks
  • Postgraduate courses
    e.g. Master of Health Care Management and Policy – Louvain (Belgium)
  • As part of the curriculum
    e.g. Stanford Anesthesia Innovation Lab, with Innovator Training track
    (Medical devices research track throughout residency)
  • ~ Non-OR anesthesia
    ➢ Starting 2017: Accreditation Council for Graduate Medical Education requires out-of-OR rotation for residents
    ➢ Am. Soc. of Anesthesiology and Am. Board of Anesthesiology recommend exposure to perioperative leadership and management skills
      • The growing importance of Nonoperating Room Anesthesia Care in the United States. Amy C. Lu et al. Editorial in Anesthesia & Analgesia 2017;124 (4): 1044-1045
EDUCATION

- Surgeons
  - Minimally invasive procedures

- Nurses
  - Postgraduate training courses available

- Administrative personnel
  - Particularly patient-friendly
AND MAYBE ... 

Design and build your own unit ...
感谢您的关注

( thank you for your attention! )