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ASA Physical Status Classification

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American Society of Anesthesiologists (ASA) Physical Status Classification System

The American Society of Anesthesiologists (ASA) Physical Status Classification System is a risk-stratifying system used mainly by anesthesiologists to help predict preoperative risks; it has been in use for more than 60 years. The system is used to assess a patient's preoperative comorbid conditions and assigns a class ranging from 1-6. The classification system is used as an additional tool with other variables such as type of surgery, frailty, and level of deconditioning in predicting perioperative risks. [1]

The ASA released an updated classification system in October 2019 with certain disease examples. Assigning a physical status classification level is a clinical decision based on multiple factors. Whereas the physical status classification can be assigned anytime during the preoperative assessment, the final physical status classification is assigned on the day of the procedure by the anesthesiologist. [1]

The definitions and examples listed below are guidelines for the clinician. [1]

ASA 1: A normal healthy patient, as follows:

- Healthy
- Normal body mass index (BMI)
- Nonsmoker
- No or minimal alcohol consumption

ASA 2: A patient with mild systemic disease without significant functional limitation, as follows:

- Active smoker
- Social alcohol consumption
- Pregnancy
- Obesity - BMI 30-40
- Controlled diabetes mellitus (DM) and hypertension
- Mild pulmonary dysfunction

ASA 3: A patient with severe systemic disease with significant functional limitation, as follows:

- Alcohol dependence or abuse
- Morbid obesity - BMI of more than 40
- Poorly controlled DM and hypertension
- Active hepatitis
- Implanted pacemaker
- Moderate reduction of ejection fraction
- End-stage renal disease - Undergoing regular scheduled dialysis
- Chronic obstructive pulmonary disease (COPD)
- Premature infant with a postconceptual age of less than 60 weeks
- Myocardial infarction more than 3 months ago
- Cerebrovascular accident (CVA) or transient ischemic attack (TIA)
- Coronary artery disease (CAD) with stents

ASA 4: A patient with severe systemic disease with constant threat to life, as follows:

- Myocardial infarction less than 3 months ago
- CVA or TIA less than 3 months ago
- CAD with stents less than 3 months ago
- Ongoing cardiac ischemia or severe valve dysfunction
- Severe reduction of ejection fraction
- Sepsis
- Disseminated intravascular coagulation (DIC)
- Acute respiratory distress syndrom (ARDS)
- ESRD - Not undergoing regular scheduled dialysis

ASA 5: A moribund patient not expected to survive without the operation, as follows:

- Ruptured thoracic or abdominal aneurysm
- Massive trauma
- Intracranial bleeding with mass effect
- Ischemic bowel with significant cardiac pathology
- Multiple organ or system dysfunction

ASA 6: A declared brain-dead patient with plans for organ donation

Note: The addition of "E" after the classification identifies emergency surgery.

Apart from the common examples provided by ASA in assigning a class, other conditions can be assigned a class based on the general principle of each classification. For example, obstructive sleep apnea (OSA) is a common finding in the adult population and is generally

assigned ASA 3 based on a national survey conducted in the United Kingdom. [2]

The subjective nature of the ASA classification makes it challenging for clinicians to assign the correct class, leading to criticism of the system for inconsistent status assignments. The updated ASA classification with examples has improved these inconsistencies. [3]

To better assess predictive risk, other essential factors should be considered, such as age, other comorbidities, home medications, duration and extent of operative procedure, anesthetic choice and medications administered, surgical team skills and technique, blood products required, implants needed, and expected postoperative care, among others. [4]

The classification system can also be used preoperatively to identify patients at high operative risk. Depending on the type of procedure, there is a varying trend of increasing likelihood of complications and mortality with increasing class. [5, 6, 7]

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Questions & Answers

Overview

What is the American Society of Anesthesiologists (ASA) physical status classification system?

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