Emergencies in anaesthesia

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“Emergencies in Anaesthesia” is published by Oxford University Press. The third edition was published in July 2020 online and in September 2020 in paperback. For this latest edition, a different editor, Alastair Martin, assumed the laborious task of restructuring the text to mirror the ABCDE emergency approach. ABCDE is a mnemonic that embodies a method of determining priorities in patient’s management during emergencies. Each alphabetical letter represents a distinct step that needs to be strictly followed in the approach to a critical patient. The steps are addressed in sequential order as follows: A (Airway), B (Breathing), C (Circulation), D (Disability/neurologic assessment) and E (Exposure and environmental control).

The term emergency is generally used in everyday language to identify an unexpected event requiring exceptional measures. In anaesthesia, the emergency is characterised by a rapid worsening of a patient’s clinical condition, which an equally rapid therapeutic intervention must match. The emergency remains arguably the biggest challenge for clinicians who have to deal with critical situations every day. The book aims at guiding the anaesthesiologists through emergencies that may occur at different timings and in different settings. Such settings include the emergency room and the labour and delivery suit, as well as before anaesthesia, in the operating theatre and in the recovery room. The book describes the main topics that need to be dealt with immediately or as soon as possible. Healthcare professionals have a minimal amount of time to assess such patients and make decisions, verify that the treatment is appropriate and remains appropriate, and also to check for alternative treatments. Improvement in emergency management depends on acquiring appropriate knowledge, experience and equipment. It is also crucial for clinicians to develop interpersonal skills, such as teamwork and leadership. The introduction of evidence-based protocols ensures a high level of appropriateness and reduces decision-making variability linked to the subjective interpretation of the patient’s condition. This variability can, in fact, negatively influence the results of care and lead to a situation in which the care provided is below expected standards, both in terms of effectiveness and efficiency.

The book is addressed to Anaesthesiologists and trainees. It is likewise an excellent tool for in-depth study and consultation for all those involved in emergencies. It is structured in 15 chapters and an appendix on medications.

The opening chapter describes the concept of crisis management and human factors. Nontechnical skills refer to behavioural, cognitive and interpersonal skills that are present in every work activity. They include a set of transferrable skills, such as effective communication, leadership, teamwork, situational awareness, decision-making and stress management. Nontechnical skills are complementary to technical skills and can contribute to successful and safe performances.

The following three chapters focus on the cardiovascular and respiratory systems, and the airway, analysing the different emergencies in clinical practice. The next five chapters describe the main critical situations in specific areas, such as paediatrics, obstetrics, neurology/neurosurgery, thoracic, metabolic and endocrine surgery.

Paediatrics is a subspeciality/discipline with its own identity and uniqueness, therefore, it is essential for anaesthesiologists to be adequately prepared to deal with even the most common clinical situations in elective or urgent cases, especially when newborns and infants are involved, that is, patients with a higher risk. The text provides therapeutic indications for paediatric and neonatal life support, conditions of trauma, burns, asthma and anaphylaxis, sepsis and shock.

Another important issue is maternal emergencies before, during and after delivery. The book examines the leading causes of maternal mortality (e.g. haemorrhage, embolism, eclampsia) and emphasises the importance of early recognition and a multidisciplinary approach.

Chapter 9 is dedicated to regional anaesthesia, which is becoming increasingly important because of the possibility of reducing patient discomfort compared with general anaesthesia. The main complications described are
toxicity from local anaesthetics, total spinal anaesthesia, epidural haematoma and spinal abscess.

Chapter 10 covers metabolic and endocrine diseases with a focus on electrolyte disorders, disseminated intravascular coagulation (DIC) and acute liver failure, as well as anaphylaxis.

The next two chapters describe difficulties encountered in the recovery room and in the emergency department where anaesthetists frequently play an active role in dealing with critical situations. In the recovery room, the problems mainly concern nausea and vomiting, pain, residual neuromuscular blockade, renal failure and postoperative delirium. In the emergency department, patients present with varying and unique degrees of life-threatening complications (e.g. major trauma, gastrointestinal bleeding, drug overdose), which require individualised care.

Chapter 13 focuses on equipment problems in the operating theatre, which can affect the quality of care. These mainly concern loss of electrical supply, and failure of the ventilator and gas delivery or the development of high airway pressure.

Chapter 14 contains a number of problems not covered elsewhere, such as major haemorrhage, use of blood products, transfusion reactions and burns.

Finally, an entire chapter is dedicated to practical procedures, divided into four sections: airways, breathing, circulation and critical patient transport. This final chapter emphasises the importance of anaesthesiologists achieving not only theoretical but also practical skills.

‘Emergencies in Anaesthesia’ is designed for quick reference. The main definitions and important concepts are given in coloured boxes to facilitate learning and consultation by anaesthetists and trainees. Information is arranged in a way that it supports memorisation and recall. Its strengths are the simple, clear and easy-to-understand writing, the inclusion of drug dosages, infusion regimens and treatment algorithms.

This book is convenient for anaesthesiologists as it provides an overview of the primary emergencies that may be faced in clinical practice. It encourages readers to reflect on their knowledge and ability to deal promptly and appropriately with the conditions described. Special attention is given to teamwork and equipment as during an emergency, it is important that all team members participate and help. In addition, the theatre must be adequately equipped, and the book reminds the reader of the necessary equipment.

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