

Contents

| | |
|--|-----------|
| <i>Foreword</i> | ix |
| <i>Acknowledgements</i> | x |
| <i>About the companion website</i> | xi |
| 1 An overview of the management of medical emergencies and resuscitation in the dental practice | 1 |
| Introduction | 1 |
| Concept of the chain of survival | 2 |
| Incidence of medical emergencies in dental practice | 3 |
| General dental council guidelines on medical emergencies | 4 |
| Resuscitation Council (UK) quality standards | 5 |
| ABCDE assessment of the sick patient | 6 |
| Medical risk assessment in general dental practice | 7 |
| Principles of safer handling during cardiopulmonary resuscitation | 8 |
| Procedure for calling 999 for an ambulance | 10 |
| Importance of human factors and teamwork | 11 |
| Conclusion | 13 |
| References | 13 |
| 2 Resuscitation equipment in the dental practice | 15 |
| Introduction | 15 |
| Recommended minimum resuscitation equipment in the dental practice | 16 |
| Checking resuscitation equipment and drugs | 20 |
| Checking resuscitation equipment following use | 22 |
| Care, handling and storage of oxygen cylinders | 23 |
| Conclusion | 25 |
| References | 25 |
| 3 ABCDE: Recognition and treatment of the acutely ill patient | 26 |
| Introduction | 26 |
| Clinical signs of acute illness and deterioration | 27 |
| The ABCDE approach | 27 |
| General principles of the ABCDE approach | 28 |
| The ABCDE approach to the sick patient | 28 |
| Principles of pulse oximetry | 34 |
| Procedure for administering oxygen to the acutely ill patient | 38 |
| Procedure for recording blood pressure | 41 |

| | |
|---|------------|
| Medical emergencies in the dental practice poster | 44 |
| Conclusion | 46 |
| References | 46 |
| 4 Respiratory disorders | 48 |
| Introduction | 48 |
| Management of acute asthma attack | 49 |
| Management of hyperventilation | 55 |
| Management of exacerbation of chronic obstructive pulmonary disease | 56 |
| Procedure for using an inhaler | 57 |
| Procedure for using a spacer device | 61 |
| Conclusion | 64 |
| References | 64 |
| 5 Cardiovascular disorders | 66 |
| Introduction | 66 |
| Management of angina | 67 |
| Management of myocardial infarction | 69 |
| Management of palpitations | 73 |
| Management of syncope | 74 |
| Conclusion | 76 |
| References | 77 |
| 6 Endocrine disorders | 78 |
| Introduction | 78 |
| Management of hypoglycaemia | 78 |
| Procedure for blood glucose measurement using a glucometer | 83 |
| Management of adrenal insufficiency | 85 |
| Conclusion | 86 |
| References | 86 |
| 7 Neurological disorders | 88 |
| Introduction | 88 |
| Management of a generalised tonic–clonic seizure | 88 |
| Management of stroke | 93 |
| Management of altered level of consciousness | 96 |
| Procedure for placing a patient in the recovery position | 97 |
| Spinal injury | 101 |
| Conclusion | 102 |
| References | 102 |
| 8 Anaphylaxis | 104 |
| Introduction | 104 |
| Definition | 105 |
| Incidence | 105 |
| Pathophysiology | 105 |
| Causes | 106 |

| | |
|--|------------|
| Clinical features and diagnosis | 107 |
| Treatment | 109 |
| Risk assessment | 113 |
| Conclusion | 114 |
| References | 115 |
| 9 Cardiopulmonary resuscitation in the dental practice | 117 |
| Introduction | 117 |
| Resuscitation Council (UK) automated external defibrillation algorithm | 118 |
| Procedure for cardiopulmonary resuscitation in the dental chair | 118 |
| Procedure for performing chest compressions | 126 |
| Conclusion | 129 |
| References | 130 |
| 10 Airway management and ventilation | 131 |
| Introduction | 131 |
| Causes of airway obstruction | 132 |
| Recognition of airway obstruction | 132 |
| Simple techniques to open and clear the airway | 133 |
| Use of oropharyngeal airway | 135 |
| Principles of ventilation | 138 |
| Treatment of foreign body airway obstruction | 147 |
| Conclusion | 150 |
| References | 150 |
| 11 Automated external defibrillation | 152 |
| Introduction | 152 |
| Ventricular fibrillation | 153 |
| Physiology of defibrillation | 153 |
| Factors affecting successful defibrillation | 154 |
| Safety issues and defibrillation | 155 |
| Procedure for automated external defibrillation | 155 |
| Conclusion | 158 |
| References | 158 |
| 12 Paediatric emergencies | 160 |
| Introduction | 160 |
| ABCDE assessment of a sick child | 161 |
| Principles of paediatric resuscitation | 162 |
| Placing a child into the recovery position | 170 |
| Management of foreign body airway obstruction | 170 |
| Conclusion | 173 |
| References | 173 |
| 13 An overview of emergency drugs in the dental practice | 175 |
| Introduction | 175 |
| Adrenaline | 176 |

| | |
|--|------------|
| Aspirin | 179 |
| Glucagon | 180 |
| Glyceryl trinitrate spray | 181 |
| Midazolam | 182 |
| Oral glucose solution/tablets/gel/powder | 185 |
| Salbutamol inhaler | 185 |
| Conclusion | 187 |
| References | 187 |
| 14 Principles of first aid in the dental practice | 189 |
| Introduction | 189 |
| Priorities of first aid | 190 |
| Responsibilities when providing first aid | 190 |
| Assessment of the casualty | 190 |
| Wounds and bleeding | 195 |
| Minor burns and scalds | 200 |
| Poisoning, stings and bites | 200 |
| Importance of record keeping | 202 |
| Summary | 203 |
| References | 203 |
| 15 Professional, ethical and legal issues | 204 |
| Introduction | 204 |
| The scope of a dental professional's accountability | 205 |
| The fifth sphere of accountability | 217 |
| Legal requirements for consent and acting in a patient's best interests | 218 |
| Duty of confidence owed to patients by dental professionals | 226 |
| Conclusion | 231 |
| References | 232 |
| <i>Index</i> | 235 |