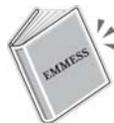


# **Textbook of Emergency Medicine Technology (III Year - B.Sc. EMT)**

**(B.Sc. Accident and Emergency Care Technology Academic Year)**

**III Year-Emergency Medicine & Emergency Medical Services III**

**Dr. Chandrashekar R**



**EMMESS Medical Publisher Private Limited**

Jnana Dayini Building' S-1337, 3rd Cross, Bharatnagar 2nd Stage,  
Near Karnataka Bank, Magadi Main Road, Herohalli, Bengaluru - 560091.

E-mail : [emmessmedpub@yahoo.co.in](mailto:emmessmedpub@yahoo.co.in)

[www.emmessmedpub.com](http://www.emmessmedpub.com)

*Published by :*

**Manjunath S. Hegde**

Managing Director

**EMMESS Medical Publisher Private Limited**

'Jnana Dayini Building' S-1337, 3rd Cross

Bharatnagar 2nd Stage, Near Karnataka Bank,

Magadi Main Road, Herohalli, Bengaluru - 560091.

E-mail : emmessmedpub@yahoo.co.in

www.emmessmedpub.com

**Textbook of Emergency Medicine Technology (III Year - B.Sc. EMT)**

**- Dr. Chandrashekar R**

© Publisher

**Pages : XVI + 606 = 622**

All rights reserved. No part of this publication should be reproduced, stored in a retrievals system, or transmitted in any form or by any means: electronic, mechanical, photocopying , recording , or otherwise, without the prior written permission of the authors and the publisher.

This book has been published in good faith that the material provided by author is original. Every effort is made to ensure accuracy of material, but the publisher, printer and author will not be held responsible for any inadvertent error(s). In case of any dispute, all legal matters to be settled under Bangalore Jurisdiction only.

First Edition : 2025

ISBN : 978-93-49373-82-2

Layout Design & Illustration : Ahana Graphics

Printed at : Dharani Printers

*Dedication*  
*This book is dedicated to My*

Father  
**Late Rajan. C**



Mother  
**Nagamani R.**



Wife  
**Mrs. Rashmi B.R**



Son  
**Thrijal Raj**



Daughter  
**Bhanvi Raj**



# PREFACE

Emergency medicine is a dynamic and rapidly evolving field that plays a crucial role in saving lives. In modern healthcare, emergency physicians must make quick and accurate decisions under high-pressure situations. This book is designed to serve as a **comprehensive guide** for students pursuing **III-year graduation course in emergency medicine**, equipping them with essential knowledge, clinical skills, and decision-making strategies.

This textbook covers **fundamental concepts, common emergency conditions, and practical management approaches** required in real-world scenarios. The content is structured to provide a **step-by-step understanding** of emergency assessment, diagnosis, and treatment. Special emphasis is given to **case-based learning, evidence-based practices, and recent advancements** in the field.

This book is intended for:

- **Undergraduate and graduate students** in emergency medicine
- **Medical interns and residents** who want to strengthen their emergency care skills
- **Healthcare professionals** seeking a reference guide for emergency management

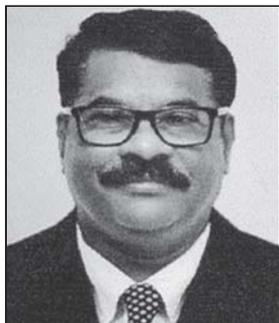
Each chapter is designed to be **concise, easy to understand, and clinically relevant**. The inclusion of **illustrations, flowcharts, and real-world case scenarios** enhances learning and retention. **Practical insights, key takeaways, and self-assessment exercises** at the end of each chapter will help students reinforce their knowledge.

**Wishing you success in your medical career!**

**Dr. Chandrashekar R**

*(Author)*

# FOREWORD



**Dr. Mohandas Rai**

Professor & HOD

Department of Pharmacology

A.J. Institute of Medical Sciences & Research Centre

Mangalore, Karnataka, India

Emergency medicine stands at the forefront of modern healthcare, requiring quick decision-making, clinical expertise, and the ability to handle critical situations under immense pressure. As medical advancements continue to evolve, the need for well-trained emergency physicians has never been greater.

Dr. Chandrashekar's textbook on **Emergency Medicine** is a well-structured and comprehensive guide tailored for students pursuing a **graduation course in emergency medicine**. This book presents complex medical concepts in a simplified manner, making it accessible to students, medical professionals, and anyone interested in mastering emergency care.

The book effectively combines **theoretical knowledge with practical applications**, ensuring that learners gain a strong foundation in emergency assessment, triage, resuscitation, and acute care management. **Case-based discussions, clinical algorithms, and evidence-based guidelines** further enhance the book's practical value, making it an essential companion for medical students and practitioners alike.

Having known Dr. Chandrashekar and his commitment to medical education, I am confident that this book will serve as an invaluable resource for students stepping into the challenging yet rewarding field of emergency medicine. I strongly recommend this book to all aspiring emergency medicine professionals and hope it will guide them toward excellence in patient care.

# CONTENT

## PAPER - I

<b>Section - I : Medical Emergencies</b>	<b>1 - 16</b>
1. Hypoglycaemia -----	2 - 3
2. Hyperglcaemia -----	3 - 4
3. Diabetic Ketoacidosis -----	4 - 5
4. Hyperosmolar Hyperglycaemic Nonketotic State -----	6 - 7
5. Poisoning -----	7 - 8
6. Anaphylaxis -----	9 - 10
7. Hypothermia -----	11 - 12
8. Hyperthermia -----	13 - 14
9. Mental Illness -----	15 - 16
<b>Section - II : Fluids and Electrolytes</b>	<b>17 - 38</b>
10. Fluid Administration (Types of Fluids) -----	18 - 20
11. Formulas (Hypo and Hypernatraemia) Formula for Hyponatraemia -----	20 - 28
12. Electrolyte Imbalance (Sodium, Potassium, Bicarbonate, Chloride) -----	28 - 38
<b>Section - III : Acid Base Emergencies (Respiratory and Metabolic Acidosis / Alkalosis)</b>	<b>39 - 44</b>
13. Acid Base Emergencies -----	40 - 44
<b>Section - IV : Respiratory Emergencies</b>	<b>45 - 68</b>
14. Foreign Body Obstruction -----	46 - 48
15. Chronic Obstructive Pulmonary Disease (COPD) -----	48 - 50
16. Asthma -----	51 - 53
17. Pneumonia -----	53 - 55
18. Pulmonary Oedema -----	56 - 57
19. Acute Respiratory Distress Syndrome (ARDS) -----	58 - 59
20. Common Medication in Respiratory Problems -----	59 - 63
21. Mechanical Ventilator - General Principles, Basic Modes of Ventilation, NIV -----	64 - 68

**Section - V : Gastrointestinal Emergencies****69 - 86**

22. Gastrointestinal Emergencies -----	70
23. Peptic Ulcer Disease-----	71 - 72
24. Cholecystitis -----	72 - 73
25. Hepatitis -----	74 - 76
26. Pancreatitis -----	76 - 78
27. Abdominal Aortic Aneurysm (AAA) -----	78 - 80
28. Bowel Obstruction -----	80 - 82
29. Hernias -----	82 - 84
30. Gastro Intestinal Bleeding -----	84 - 86

**Section - VI : Cardiovascular Emergencies****87 - 108**

31. Angina Pectoris -----	88 - 89
32. Myocardial Infarction (MI)-----	90 - 92
33. Congestive Cardiac Failure (CCF) / Congestive Heart Failure (CHF) -----	92 - 94
34. Aortic Aneurysm -----	94 - 96
35. Hypertensive Emergencies -----	96 - 98
36. 12 Lead ECG and Interpretation (12 Lead ECG And Interpretation of Normal ECG)-----	99 - 100
37. Heart Block-----	101 - 103
38. Cardiac Arrhythmias -----	104 - 107

**Section - VII : Central Nervous System Emergencies****109 - 118**

39. Meningitis -----	110 - 111
40. Stroke-----	112 - 113
41. Seizure-----	113 - 115
42. Status Epileptics -----	115 - 116
43. Syncope -----	116 - 117

**Section - VIII : Genitourinary Emergencies****119 - 128**

44. Renal Failure -----	120 - 121
45. Urolithiasis -----	122 - 123
46. Urinary Tract Infection -----	123 - 125
47. Haematuria -----	126 - 128

**Section - IX : Haematological Disorders** **129 - 140**

48. Anaemia and Types ----- 130 - 132  
49. Polycythaemia ----- 132 - 134  
50. White Blood Disorders ----- 134 - 136  
51. Platelet Abnormalities ----- 137 - 140

**Section - X : Endocrine Emergencies** **141 - 156**

52. Diabetic Ketoacidosis ----- 142 - 144  
53. Hyperosmolar Coma ----- 144 - 146  
54. Thyroid Crisis ----- 146 - 147  
55. Diabetes Insipidus ----- 148 - 150  
56. Vomiting ----- 150 - 152  
57. Diarrhoea ----- 153 - 155

**Section - XI : Emergency Drugs** **157 - 224**

58. Emergency Drugs ----- 158 - 224

**Section - XII : Dermatological Emergencies** **225 - 242**

59. Viral Infections ----- 226 - 228  
60. Acute Leprosy Reactions ----- 229 - 230  
61. Pemphigus Vulgaris ----- 231 - 232  
62. Systemic Lupus Erythematosus ----- 232 - 233  
63. Acute Erythroderma ----- 234 - 235  
64. Severe Pruritus ----- 235 - 236  
65. Scabies ----- 236 - 237  
66. Anaphylaxis ----- 238 - 239  
67. Communicable Diseases ----- 239 - 241

**Section - XIII : Common Treatment** **243 - 266**

68. Meningitis ----- 244  
69. Hepatitis ----- 245 - 246  
70. Malaria ----- 246 - 247  
71. Tuberculosis ----- 248 - 249  
72. Dengue ----- 249 - 250

73. Acquired Immunodeficiency Syndrome (AIDS) -----	251 - 252
74. Typhoid -----	253 - 254
75. Plague -----	254 - 255
76. Polio -----	256 - 257
77. Tetanus -----	257 - 259
78. Chickenpox -----	259 - 260
79. Cholera -----	261 - 262
80. Measles -----	262 - 264
81. Category: III Infection, Control Measures, Precautions During Transfer -----	264 - 265

### **Section - XIV : Toxicology**

**267 - 290**

82. Define The Term Poison -----	268 - 269
83. Opiates Toxicity -----	270 - 271
84. Organophosphates -----	271 - 272
85. Carbon Monoxide Poisoning -----	272 - 273
86. Cyanide Poisoning -----	273 - 274
87. Caustics -----	275 - 276
88. Copper Sulphate -----	276 - 277
89. Digoxin Toxicity -----	277 - 278
90. Hydrocarbons -----	278 - 279
91. Tricyclic Antidepressant Toxicity -----	279 - 280
92. Arsenic -----	280 - 281
93. Iron Poisoning -----	281 - 282
94. Acetaminophen (Paracetamol) Overdose -----	282 - 283
95. Ethanol Poisoning -----	284 - 285
96. Methanol Poisoning -----	285 - 286
97. Oleander -----	286 - 287
98. Oduvanthalai (Calotropis Gigantea) -----	288 - 289

### **Section - XV : Emergencies Due to Venomous Bites and Stings**

**291 - 306**

99. Snake Bite -----	292 - 293
100. Scorpion Stings -----	293 - 295
101. Spider Bite -----	295 - 296
102. Bee and Wasp Stings -----	297 - 298
103. Dog Bite -----	298 - 300

104. Cat Bite -----	300 - 301
105. Human Bite -----	302 - 303
106. Monkey Bite -----	304 - 305

**Section - XVI : Industrial Hazards 307 - 320**

107. Electrocutation -----	308 - 310
108. Amputation -----	310 - 312
109. Crush Injuries -----	312 - 314
110. Falls From Height -----	315 - 317
111. Assaults -----	317 - 319

**Section - XVII : Obstetrical Emergencies 321 - 336**

112. Pre-Eclampsia -----	322 - 324
113. Placenta Praevia -----	324 - 325
114. Abruption / Abruptio Placenta -----	326 - 327
115. Post-Partum Haemorrhage -----	328 - 329
116. Amniotic Fluid Embolism -----	330 - 331
117. Cord Prolapses -----	332 - 333
118. Ectopic Pregnancy -----	334 - 335

**Section - XVIII : Mental Health Emergencies 337 - 342**

119. Aggressive Patient -----	338 - 339
120. Suicide -----	339 - 340
121. Deliberate Self-Harm -----	341 - 342

**Section - XIX : Paediatric Emergencies 343 - 368**

122. Neonatal Resuscitation -----	344 - 345
123. Paediatric Resuscitation -----	345 - 346
124. Assessment of Newborn and Paediatric -----	347 - 349
125. Meconium Aspiration -----	349 - 351
126. Diaphragmatic Hernia -----	351 - 353
127. Apnoea -----	353 - 355
128. Drowning -----	355 - 357
129. Sids (Sudden Infant Death Syndrome) -----	358 - 360
130. Neonatal Seizure -----	360 - 362
131. Febrile Convulsion -----	363 - 365
132. Shock -----	366 - 368

## PAPER - II

<b>Section - I : Principles of Anaesthesia</b>	<b>369 - 382</b>
1. General Anaesthesia -----	370 - 377
2. Local Anaesthesia -----	377 - 380
3. Regional Anaesthesia -----	381 - 382
<b>Section - II : Wounds and Suturing</b>	<b>383 - 398</b>
4. Definition and Types of Common Wounds -----	384 - 387
5. Treatment of Wound -----	388 - 389
6. Cleansing The Wound -----	389 - 390
7. Wound Healing -----	391 - 394
8. Principles of Incision and Closure (Including Suturing) -----	394 - 398
<b>Section - III : Burns</b>	<b>399 - 408</b>
9. Skin Anatomy -----	400 - 401
10. Classification of Burn -----	402 - 404
11. Special Burn Considerations -----	404 - 408
<b>Section - IV : Foreign Body Obstruction</b>	<b>409 - 412</b>
12. Foreign Body Obstruction -----	410 - 411
<b>Section - V : Gastrointestinal System</b>	<b>413 - 432</b>
13. Acute Appendicitis -----	414 - 415
14. Acute Pancreatitis -----	416 - 417
15. Intestinal Obstruction -----	418 - 420
16. Upper GI Bleed -----	420 - 423
17. Lower GI bleed -----	423 - 426
18. Gastric And Duodenal Ulcer -----	426 - 430
19. Renal Colic -----	430 - 432
<b>Section - VI : Trauma</b>	<b>433 - 444</b>
20. Head Injury -----	434 - 436
21. Thoracic Injuries -----	436 - 438
22. Blunt Trauma -----	439 - 441
23. Penetrating Trauma -----	442 - 444

**Section - VII : Torsion** **445 - 448**

24. Torsion Testis ----- 446 - 448

**Section - VIII :** **449 - 462**

25. Assisting in Procedure of Central Venous Access ----- 450 - 451  
26. Assisting in Procedure of Suturing Wounds ----- 452 - 453  
27. Assisting in Procedure of Tracheostomy ----- 454 - 455  
28. Assisting in Procedure of Intercostal Drainage ----- 456 - 457  
29. Assisting in Procedure of Needle Thoracocentesis ----- 457 - 458  
30. Assisting in Procedure of Cricothyroidectomy ----- 459 - 460  
31. Skills of Intubation in A Maniquein ----- 460 - 461

**PAPER - III**

**Section - I : Instrumentation in Emergency Services** **463 - 504**

1. Introduction To Biomedical Engineering (Man – Machine Relationship) ----- 464 - 465  
2. 12 Lead ECG and Interpretation (12 Lead ECG and Interpretation of Normal ECG) ----- 466 - 469  
3. DC Defibrillator ----- 470 - 473  
4. Intravenous Pumps ----- 474 - 476  
5. Laryngoscope, Ambubag, Suction Machine ----- 476 - 481  
6. SPO2 Monitoring, Temperature Monitoring ----- 481 - 483  
7. BP Apparatus, BP Monitoring, IBP ----- 484 - 486  
8. Ventilators Intensive Care, Portable Manual Resuscitator ----- 487 - 489  
9. Radiology Equipment & Radiation Hazards ----- 490 - 492  
10. Suction Machine ----- 492 - 494  
11. Nebuliser ----- 494 - 495  
12. Medical Gases ----- 496 - 497  
13. Ambulance and ITS Power Supply ----- 498  
14. Dialysis Machine ----- 499 - 500  
15. Infant Warmer & Incubator ----- 501 - 504

**Section - II : Clinical Procedures in Emergency Room****505 - 540**

16. Vital Sign Measurement -----	506 - 507
17. Endotracheal Intubation and Extubation -----	507 - 509
18. Drugs Through ET Tube -----	510
19. Tracheostomy Insertion And Management -----	511 - 512
20. Suctioning an Artificial Airway -----	513 - 514
21. Nasotracheal Suctioning -----	514 - 515
22. Insertion of Nasopharyngeal and Oropharyngeal Airway -----	516 - 518
23. Mechanical Ventilation -----	518 - 520
24. Intercostal Drainage-----	520 - 522
25. Thoracocentesis -----	523 - 525
26. Laryngeal Mask Airway -----	525 - 527
27. Oesophageal – Tracheal Combitube -----	527 - 529
28. Pulse Oximetry -----	529 - 531
29. Capnometry -----	531 - 533
30a. Oxygen Therapy -----	533 - 535
30b. Nebulizers -----	535 - 537
31. Metered Dose Inhaler -----	537 - 539

**Section - III : Cardiovascular Procedures (Observation)****541 - 554**

32. Cardiac Monitoring -----	542 - 543
33. Central Venous Pressure Monitoring -----	543 - 544
34. Central Venous Cannulation -----	545 - 546
35. Transcutaneous Cardiac Pacing -----	546 - 547
36. Transvenous Cardiac Pacing -----	548 - 549
37. Pericardiocentesis -----	549 - 551
38. Cardioversion -----	551 - 553
39. Defibrillation -----	553 - 554

**Section - IV :Cannulating Umbilical Vein****555 - 560**

40. Cannulating umbilical Vein -----	556 - 557
41. Intraosseous Infusion -----	558 - 559

<b>Section - V : Gastrointestinal Procedures</b>		<b>561 - 578</b>
42. Insertion of Nasogastric Tube -----		562 - 563
43. Insertion of Enteral Feeding Tube and Initiation of Feedings -----		564 - 565
44. Gastric Lavage -----		566 - 567
45. Upper Gastrointestinal Endoscopy -----		568 - 569
46. Insertion of Rectal Tube -----		570 - 571
47. Paracentesis -----		572 - 573
48. Peritoneal Lavage -----		573 - 574
49. Activated Charcoal -----		575 - 576
50. Whole Bowl Irrigation (WBI) -----		576 - 577
<b>Section - VI : Genitourinary Procedures</b>		<b>579 - 588</b>
51. Urethral Catheterization -----		580 - 581
52. Peritoneal Dialysis -----		582 - 583
53. Placement And Management of External Arteriovenous Shunt (Assisting) -----		584 - 585
54. Continuous Arteriovenous Hemofiltration (Assisting) -----		586 - 587
<b>Section - VII : Intravenous Therapy</b>		<b>589 - 596</b>
55. Insertion of Intravenous Catheter -----		590 - 591
56. Administration of Parenteral Nutrition -----		592 - 593
57. Blood and Blood Product Administration -----		594 - 595
<b>Section - VIII : Neurologic Procedures</b>		<b>597 - 600</b>
58. Lumbar Puncture (Observation/Assisting) -----		598 - 599
<b>Index</b>		<b>601 - 606</b>

# Abbreviations

AAA	- Abdominal aortic aneurysm	CT	- Computed Tomography
ABCs	- Airway, Breathing, Circulation	CTG	- Cardiotocography
ABG	- Arterial Blood Gases	CVA	- Central Venous Access
ACLS	- Advanced cardiac life support	CVC	- Central venous catheter
ACV	- Assist-Control Ventilation	DENV	- Dengue virus
ADH	- Antidiuretic hormone	DI	- Diabetes Insipidus
AED	- Automated External Defibrillator	DIC	- Disseminated Intravascular Coagulation
AF	- Atrial fibrillation (AF)	DKA	- Diabetic Ketoacidosis
AKI	- Acute Kidney Injury	DKA	- Diabetic Ketoacidosis
ALDH2	- Aldehyde dehydrogenase	DOACs	- Direct Oral Anticoagulants
APAP	- Automatic Positive Airway Pressure	DPI	- Dry Powder Inhaler
aPTT	- Activated prothrombin time	DSH	- Deliberate self-harm
ARDS	- Acute Respiratory Distress Syndrome	ECG	- Electrocardiogram
AVNRT	- AV nodal re-entrant tachycardia	ECT	- Electroconvulsive Therapy
AVRT	- AV re-entrant tachycardia	EEG	- Electroencephalography
BCG	- Bacillus Calmette-Guérin	EGD	- Endoscopy
BiPAP	- Bi-Level Positive Airway Pressure (BiPAP):	EMG	- Electromyography
BUN	- Blood urea nitrogen	ENL	- Erythema Nodosum Leprosum
BVM	- Bag-Valve Mask	ERCP	- Endoscopic Retrograde Cholangiopancreatography
CABG	- Angioplasty with stenting and Coronary artery bypass grafting	ESWL	- Extracorporeal Shock Wave Lithotripsy
CAVH	- Continuous Arteriovenous Hemofiltration	ETC	- Eesophageal-Tracheal Combitude
CBC	- Complete Blood Count	EVAR	- Endovascular aneurysm repair
CCB	- Calcium channel blocker	FAST	- Focused Assessment with Sonography for Trauma
CCF	- Congestive Cardiac Failure	FBAO	- Foreign body airway obstruction
CDH	- Congenital Diaphragmatic Hernia	FEV	- Forced Expiratory Volume
CFS	- Cerebrospinal fluid	FFP	- Fresh Frozen Plasma
CHF	- Congestive Heart Failure	FHR	- Foetal heart rate
CKD	- Chronic kidney disease	FiO	- Fraction of Inspired Oxygen
CO	- Carbon monoxide	FVC	- Forced Vital Capacity
COPD	- Chronic Obstructive Pulmonary Disease	GABA	- Gamma-aminobutyric acid
COVID-19	- Corona Virus Disease Year of discovery 2019	GCS	- Glasgow Coma Scale
COX	- Cyclooxygenase	GERD	- Gastroesophageal reflux disease
CPAP	- Continuous Positive Airway Pressure	HF	- Heart Failure
CPAP	- Continuous Positive Airway Pressure	HHS	- Hyperosmolar Hyperglycaemic State
CPR	- Cardiopulmonary resuscitation		

HIV	- Human Immunodeficiency Virus	PID	- Pelvic inflammatory disease
HONK	- Hyperosmolar Hyperglycaemic Nonketotic State	PLC	- Phospholipase C
HRT	- Hormonal replacement therapy	PPE	- Personal protective equipment
IBD	- Inflammatory bowel disease	PPH	- Postpartum Haemorrhage
IBP	- Invasive blood pressure	PPIs	- Proton Pump Inhibitors
IBS	- Irritable bowel syndrome	PRIS	- Propofol Infusion Syndrome
ICD	- Intercostal drainage	PSV	- Pressure Support Ventilation
ICDs	- Implantable Cardioverter Defibrillators	PSVT	- Paroxysmal Supraventricular Tachycardia
ICU	- Intensive care unit	PT	- Prothrombin time
IM	- Intramuscular	RSI	- Rapid Sequence Intubation
INH	- Isoniazid	SARS-CoV-2	- Severe Acute Respiratory Syndrome Coronavirus 2
IN	- Intranasal	SCA	- Sudden Cardiac Arrest
ITP	- Idiopathic thrombocytopaenia purpura	SIADH	- Syndrome of Inappropriate Antidiuretic Hormone
IV	- Intravenous	SIMV	- Synchronized Intermittent Mandatory Ventilation
IVIG	- Intravenous Immunoglobulin	SLE	- Systemic lupus erythematosus
JAK2	- Januskinase 2	SVT	- Supraventricular tachycardia
KCL	- Potassium chloride	TACO	- Transfusion-Associated Circulatory Overload
LGIB	- Lower GI bleeding	TBSA	- Total body surface area
LMA	- Laryngeal Mask Airway	TBW	- Total body water
MAS	- Meconium Aspiration Syndrome	TCP	- Transcutaneous Cardiac Pacing
MET	- Medical Expulsive Therapy	TPN	- Total Parenteral Nutrition
MI	- Myocardial Infarction	TRALI	- Transfusion-Related Acute Lung Injury
MRI	- Magnetic Resonance Imaging	UGIB	- Upper GI bleeding
NAC	- N-Acetylcysteine	UTI	- Urinary tract infection
NGT	- Nasogastric Tube	VAC	- Vacuum assisted closure
NICU	- Neonatal intensive care unit	VAS	- Visual Analog Scale
NIV	- Non-invasive ventilation	VCV	- Volume-Controlled Ventilation
NMDA	- N-methyl-D-aspartate	VT	- Ventricular tachycardia
NPA	- Nasopharyngeal airway	VZV	- Varicella-zoster virus
NPO	- Nil by mouth	WBI	- Whole bowel irrigation
NSAID	- Non-Steroidal Anti-Inflammatory Drug		
NSSI	- Non-suicidal self-injury		
OPA	- Oropharyngeal airway		
ORS	- Oral rehydration solutions		
OSA	- Obstructive Sleep Apnoea		
PCA	- Patient-Controlled Analgesia		
PCI	- Percutaneous coronary intervention		
PCN	- Percutaneous Nephrolithotomy		
PEG	- Polyethylene glycol		