

# Contents

<i>Contributors</i>		<i>vii</i>
<i>Foreword by Devendra K Gupta</i>		<i>ix</i>
<i>Preface</i>		<i>xi</i>
<b>Section 1: Fundamental Aspects</b>		
<b>1. Past, Present and Future of Pediatric Cardiac Anesthesia</b>	3	
<i>Kulbhushan Saini, Usha Kiran</i>		
<b>2. Development of Cardiovascular System</b>	9	
<i>Ira Dhawan, Parag Gharde</i>		
<b>3. Cardiac Drugs for Pediatric Cardiac Surgical Patients—Anesthesia Concerns</b>	31	
<i>Sandeep Joshi, Mukul Kumar Jain, Poonam Motiani</i>		
<b>4. Preoperative Evaluation and Preparation of the Pediatric Patients with Cardiac Disease</b>	40	
<i>Vandana Bharadwaj, Usha Kiran</i>		
<b>5. Genetic Syndromes and Congenital Heart Disease in Relevance to Anesthesiologists</b>	50	
<i>Amita Sharma, Souvik Dey, Rohan Magoon</i>		
<b>6. Chest X-ray in Pediatric Patient with Heart Disease</b>	63	
<i>Suruchi Ladha, Neeti Makhija</i>		
<b>7. Electrocardiography in Children</b>	76	
<i>Anita Saxena, B Uma</i>		
<b>8. Perioperative Transesophageal Echocardiography in Congenital Heart Disease</b>	91	
<i>Shrinivas V Gadhinglajkar, Rupa Sreedhar</i>		
<b>9. Anesthesia Concerns for Cardiac Catheterization and Imaging Techniques</b>	157	
<i>Suruchi Hasija, N Siva Krishna</i>		
<b>10. Fluid and Electrolyte Management in Pediatric Cardiac Surgery</b>	170	
<i>Suruchi Ladha, Ridhima Sharma</i>		
<b>11. Cardiopulmonary Bypass in Children</b>	182	
<i>Ameya Karanjkar, Neeti Makhija</i>		
<b>12. Neuroprotective Strategies in Congenital Heart Surgery</b>	191	
<i>Kalpna Irpachi, Sandeep Chauhan</i>		
<b>13. Myocardial Protection in Pediatric Cardiac Surgery</b>	200	
<i>Madhur Malik, Minati Choudhury, V Devagourou</i>		
<b>14. Hemostasis in Pediatric Cardiac Surgery</b>	214	
<i>Arindam Choudhary</i>		
<b>15. Pulmonary Hypertension and Congenital Heart Disease</b>	225	
<i>Minati Choudhury, Rohan Magoon</i>		
<b>Section 2: Management for Specific Cardiac Lesions or Surgical Procedure</b>		
<b>16. Atrial Septal Defect</b>	243	
<i>Suruchi Ladha, Palleti Rajshekar, Amol Bhoje</i>		
<b>17. Ventricular Septal Defect</b>	255	
<i>Neeti Makhija, Shivani Aggarwal, Bharat Siddharth</i>		
<b>18. Patent Ductus Arteriosus</b>	263	
<i>Suruchi Ladha, Mukesh Kumawat</i>		
<b>19. Atrioventricular Septal Defects</b>	275	
<i>Vishwas Malik, Arun Subramanian, Sachin Talwar</i>		
<b>20. Total Anomalous Pulmonary Venous Circulation (TAPVC)</b>	281	
<i>Nandita Sreedhar, Rohan Magoon</i>		
<b>21. Tetralogy of Fallot</b>	286	
<i>Sambhunath Das</i>		
<b>22. Anesthesia for Blalock-Taussig Shunt (BT Shunt)</b>	296	
<i>Ramesh Kashav, Vijay Gupta</i>		
<b>23. Ebstein's Anomaly</b>	302	
<i>Rohan Magoon, Amita Sharma, Neeti Makhija</i>		
<b>24. Pulmonary Artery Banding</b>	313	
<i>Rupa Sreedhar, Shrinivas V Gadhinglajkar</i>		
<b>25. Transposition of Great Arteries</b>	319	
<i>Vishnu Dutt</i>		
<b>26. Congenitally Corrected Transposition of the Great Arteries</b>	333	
<i>Rupa Sreedhar, Shrinivas V Gadhinglajkar</i>		
<b>27. Coarctation of Aorta</b>	344	
<i>Ummed Singh, Dheeraj Sharma, Jitin Narula</i>		
<b>28. Single Ventricle Physiology</b>	349	
<i>Rohan Magoon, Usha Kiran</i>		
<b>29. Persistent Truncus Arteriosus</b>	354	
<i>Minati Choudhury, Usha Kiran</i>		

<b>30.</b> Vascular Rings and Sling <i>Karamsi Ashok Kumar, Sambhunath Das</i>	363	<b>Section 3: Postoperative Care</b>	
<b>31.</b> Congenital Mitral Valve Stenosis <i>Parag Charde</i>	368	<b>38.</b> Low Cardiac Output Syndrome after Pediatric Cardiac Surgery <i>GD Puri, Neeti Dogra</i>	443
<b>32.</b> Aortic Valve Anomalies <i>Parag Charde</i>	382	<b>39.</b> Postoperative Respiratory Function, Complications and their Management in Pediatric Cardiac Surgical Patients <i>Manoj Sahu, Archana Agarwal</i>	452
<b>33.</b> Pulmonary Valve Anomalies <i>Parag Charde</i>	393	<b>40.</b> Postoperative Pain Management in Infants and Children <i>Ramesh Menon, Ira Balakrishnan, Ridhima Sharma, Ripon Choudhary</i>	464
<b>34.</b> Tricuspid Valve Anomalies <i>Parag Charde</i>	400	<b>41.</b> Extracorporeal Membrane Oxygenation (ECMO) <i>Sandeep Chauhan, Alok Kumar</i>	476
<b>35.</b> Anomalous Left Coronary Artery Arising from Pulmonary Artery (ALCAPA) <i>Poonam Malhotra Kapoor, Shivani Aggarwal, Sachin Talwar</i>	408	<i>Index</i>	481
<b>36.</b> Cardiomyopathies in Children <i>B Uma, Usha Kiran</i>	416		
<b>37.</b> Minimally Invasive Cardiac Surgery for Congenital Heart Disease <i>Minati Choudhury, V Devagourou</i>	430		