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Website: www.ijaweb.org

DOI: 10.4103/ija.IJA_565_17

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The post-graduate issue on cardiovascular diseases and anaesthesia

This September post-graduate issue of the IJA is focused on important cardiovascular diseases and their anaesthetic management in patients presenting for non-cardiac surgery. Both cardiovascular diseases and interventions for various cardiovascular conditions are on the increase, and anaesthesiologists are required to provide perioperative care to such patients with increasing frequency. This compilation of articles written by senior authors, all experts in their field, is an effort to provide a comprehensive yet concise review of the subject that will benefit students as well practicing anaesthesiologists.

Systemic hypertension is a major public health problem.^[1] The perioperative concerns, including the impact on various organs, pre-operative evaluation, recommendations for control and anaesthetic management are duly tackled by the authors.

Ischaemic heart disease (IHD) is commonly encountered in non-cardiac surgery. Both IHD and its treatment, such as the presence of intracoronary artery stents are associated with significant morbidity and mortality during the perioperative period. An article in this issue deals with the pre-operative evaluation and risk assessment keeping in mind the pathophysiology, comorbid conditions and drug therapy, as well as evidence-based recommendations for perioperative management of such patients.

Dysrhythmias are prevalent for a variety of causes and are frequently seen in the perioperative management of patients. The types of dysrhythmias, and drug and other available therapies are enumerated while dealing with atrial fibrillation in detail, including aspects of anticoagulation, special situations like the pregnant patient and recommendations for initiation of therapy.^[2]

Rheumatic heart disease remains an important preventable cause of cardiovascular death and disability.^[3] Mitral stenosis of rheumatic origin is still the most common valvular pathology seen in India. An article in this issue provides the basic understanding and the current recommendations for the anaesthetic management of patients with valvular heart disease.

There is a need for detailed knowledge of implanted cardiac devices such as pacemakers and automated implanted cardioverters and defibrillators. An article elaborates on the appropriate assessment of its function and precautions to be taken in patients with these devices *in situ*.

The problem of the patient with congenital heart disease who has grown to be an adult, or with an uncorrected, palliated or corrected lesion has been put in the perspective of problems associated with individual lesions and their management.

Cardiomyopathies are genetic in origin or may be acquired as in the peri-/post-partum phase and the Takotsubo or stress cardiomyopathy with its dramatic consequences.^[4] Great care is needed while anaesthetising such patients, and meticulous attention must be paid to the anaesthetic technique and advanced haemodynamic monitoring throughout the perioperative period. All these aspects are covered in detail.

Pulmonary arterial hypertension is a consequence of both pulmonary and cardiac disease. Therapies available for treatment of the same are elucidated on, and the perioperative care of such patients is detailed.

Advances in organ protection and techniques for bridging therapy in patients with heart failure have led to heart transplantation being done more frequently. The unique pathophysiology of the transplanted

heart, complications of immunosuppression and its effects on the heart and body have to be borne in mind when such patients present for non-cardiac surgery in elective and emergent situations. The section on this does more than enough justice to the topic.

Cardiopulmonary bypass is occasionally required during non-cardiac surgery for tumours involving the heart and great vessels, mediastinal masses and airway obstruction. The article on cardiopulmonary bypass is a quick reckoner for the uninitiated dealing with the essentials in step by step manner.

We hope you find this issue useful in your practice and in your academic endeavours.

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How to cite this article: Gopinath R, Divatia JV. The post-graduate issue on cardiovascular diseases and anaesthesia. *Indian J Anaesth* 2017;61:695-6.

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