

BOOK REVIEWS

A Manual on Cardiac Resuscitation. 2nd ed. By Robert M. Hosler, M.D., F.A.C.S. (Pp. xx + 208; illustrated. 42s.) Springfield, Ill.: Charles C. Thomas. Oxford: Blackwell Scientific Publications. 1958.

The sudden call, by anaesthetist or surgeon attending to a patient on the operating table, that the heart has ceased to beat, strikes awe into the small band that help at the operation, in that their experience has shown that it usually ceases for good. Thus, to restore the heart beat has proved so disappointing a task in the past that suggestions to improve the methods practised in cardiac resuscitation are welcome. This small manual contains such suggestions to overcome cardiac arrest whenever it is met.

The primary aim of resuscitation is to provide adequate oxygenated blood to vital tissues until the heart beat is satisfactorily restored. The upper centres of the brain are the most vulnerable to the lack of oxygen and these suffer irreversible damage if anoxia is prolonged for upwards of four minutes; the next in order of vulnerability are the adrenal bodies and subsequently the kidneys and the liver, followed by the basal ganglia which can survive for up to thirty minutes. To ensure an adequate supply of oxygen to these several stations needs an adequate supply of oxygen in the lungs with efficient elimination of carbon dioxide, sufficient haemoglobin to transport the oxygen, and a beating heart to propel the oxygenated haemoglobin to the various organs in order that they may remain viable.

The treatment of cardiac arrest should start with prevention, so that attention should be paid to correcting anaemia if present, premedication with morphine and atropine, correct positioning of the patient on the operating table, and especially the provision of a free air passage to the lungs, for inhalation of mucus or vomitus is the commonest single cause of cardiac arrest.

Once the diagnosis of cardiac arrest has been made no attempt at artificial respiration by compressing the thoracic cage should be made, nor should adrenaline be injected through the chest wall into the heart, or any other kind of intramuscular or intravenous medication. Both anaesthetist and surgeon should immediately embark on their respective urgent tasks. The anaesthetist should introduce an intratracheal catheter and inflate and deflate the lungs adequately by compression of a rubber bag filled with 100% oxygen; this is the foundation of success. The surgeon opens the chest through a transverse incision in the left fifth intercostal space when the heart is lifted up and pressed against the sternum when massage is commenced. Soon the pericardium is opened and massage continued with the heart grasped in the hand. It is then necessary to ascertain whether the condition is one of cardiac standstill or ventricular fibrillation. If the former state prevails and the heart does not resume its rhythmic beat on adequate massage, 5 c.c. of 1 : 10,000 adrenaline solution should be introduced into the right ventricle and massage continued. If ventricular fibrillation is present, the heart is massaged till pink, when the electrodes of the defibrillator are quickly and accurately applied, taking care to disconnect the electrocardiograph before introducing the shock. If necessary 4 c.c. of 1% procaine are introduced into the right ventricle before resuming cardiac massage and repeating the shock from the defibrillator.

This book, expensive as it is, should be in the hand of every anaesthetist and surgeon.

Circulation. Proceedings of the Harvey Tercentenary Congress. Ed.: John McMichael, M.D., F.R.C.P., F.R.S. (Pp. xxiii + 503; illustrated. 50s.) Oxford: Blackwell Scientific Publications. 1958.

By general consent the Harvey Tercentenary Congress, held last year under the presidency of Mr. Dickson Wright, was an unqualified success. Owing to the introduction of many new methods of investigation, the time had become ripe for a symposium of our knowledge on the circulation considered from the historical, anatomical, physiological, medical and surgical points of view. The papers, given by a very distinguished group of investigators from all parts of the world, were throughout of a high order, and the transatlantic radio-telephonic discussion was unique.

Professor McMichael has skilfully edited the proceedings and the result is a well-produced and well-illustrated volume of almost 500 pages. It is not a book to be reviewed but to be read, or at least to be on the doctor's shelves ready for constant reference.

How insistently does this book send one's thought back to that wonderful passage in the *De Motu Cordis* where Harvey gave his reasons for publication. As Professor Franklin translates it the passage runs—"that others, given this lead, and relying on more productive talents, may find an opportunity to carry out the task more accurately and to investigate more skilfully". Though of course Harvey was too modest, we, at least, should cut out that thrice repeated "more".