

Literature Briefs

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Briefs were submitted by Drs. John Adriani, C. M. Ballinger, N. A. Bergman, Peter P. Bosomworth, M. T. Clarke, H. S. Davis, Deryck Duncaif, Martin Helrich, G. Holman, J. J. Jacoby, F. C. McParland, S. J. Martin, A. S. Paterson, R. E. Ponath, Alan Randall, W. H. Ring, H. S. Rottenstein, and P. H. Sechzer. Briefs appearing elsewhere in this issue are a part of this column.

CARDIAC ARREST The incidence of cardiac arrest during induction of anesthesia for burns is considered to be much higher than during induction in other types of cases. Increased vagal activity produced by suxamethonium or intubation or both can be prevented by large doses of atropine. Other factors which can contribute to the arrest are said to be anxiety and reduction in true cholinesterase and pseudocholinesterase due to liver dysfunction. The effects of hypoxia, hypercarbia and excessive intrapulmonary pressure are more poorly tolerated owing to systemic toxemia. Should cardiac arrest occur and be successfully treated it is recommended that the operation be carried out. (*Bush, G. H., and others: Danger of Suxamethonium and Endotracheal Intubation in Anaesthesia for Burns. Brit. Med. J. 2: 1081 (Oct. 27) 1962.*)

CLOSED-CHEST CARDIAC MASSAGE Three cases are presented in which external cardiac massage was used in conjunction with external electric shock for the successful management of ventricular fibrillation complicating acute myocardial infarction. Endotracheal intubation was accomplished immediately prior to the defibrillation in each of these patients. Two of the three patients had rib fractures with one of them sustaining a bilateral pneumothorax. (*Moss, A. J., and others: Closed-Chest Cardiac Massage in the Treatment of Ventricular Fibrillation Complicating Acute Myocardial Infarction. New Engl. J. Med. 267: 679 (Oct. 4) 1962.*)

EXTERNAL CARDIAC MASSAGE In performing external cardiac massage in an adult, it is only necessary to move the lower part of the sternum toward the spine about 1 to 1½ inches. However, the operator should strive for a depression of 3 inches since, unless the patient is on a very firm surface, the operator will think he is moving the sternum adequately when all he may be doing is bouncing the patient's bed. The most likely cause for the heart to fail to continue beating is that the ventricles have fibrillated. If a defibrillator with 400 to 500 volts is available, defibrillation may be carried out without opening the chest. For an extremely large patient, particularly if the chest wall is obese, a voltage as high as 700 may be required. Any voltage exceeding 200 is dangerous to the operator (electrocution) unless he uses properly designed electrodes and avoids touching the patient or the electrodes during the procedure. If external massage does not produce an adequate carotid pulse with restoration of normal pupils, the operator should not delay in opening the chest. (*Bentall, H. H.: External Cardiac Massage. Proc. Roy. Soc. Med. 55: 29 (Aug.) 1962.*)

EEG AFTER CARDIAC ARREST Prediction from common clinical signs is difficult in early stages of cardiopulmonary resuscitation as to whether a patient will recover fully or whether irreversible cerebral damage has occurred. Recovery of cerebral function as detected by electroencephalogram after re-establishment of circulation depends upon a number of factors, among the most important are the total duration of inadequate cerebral circulation, patient's body temperature, and adequacy of ventilation. EEG changes in children are more obvious and dramatic than in adults, but careful and well-timed EEG studies should yield valuable information about the chances of survival after cardiorespiratory resuscitation at any age. Occur-