Anesthesiology
V 39, No 3, Sept 1973

Literature Briefs

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Literature briefs were submitted by Drs. G. Battit, B. Dalton, B. Das, A. Goldblatt, P. Hallowell, J. Harp, J. Pender, H. Rackow, P. Sabawala, E. Salanitre, and S. Shnider. Briefs appearing elsewhere in this issue are part of this column.

Circulation

BEDSIDE EXERCISE TEST Maximal isometric handgrip exercise, like dynamic treadmill exercise, effectively increased hemodynamic stress, especially arterial pressure and heart rate, in six normal subjects and 33 patients with heart disease. Handgrip exercise reduces recording artifact. Among 27 patients with atherosclerotic heart diseases, exercise produced or augmented pre-existing changes in the precordial apical pulsation and diastolic gallop sounds which were not evocable in normal subjects. Apex cardiography and phonocardiography, each a bedside noninvasive technique, detect left ventricular dysfunction or decreased compliance. The dangers associated with an induced arrhythmia or hypertension and the consequences of an inadvertent Valsalva maneuver inherent in this test are outlined. (*Siegel, W., and others: Use of Isometric Handgrip for the Indirect Assessment of Left Ventricular Function in Patients with Coronary Atherosclerotic Heart Disease. Am. J. Cardiol. 30: 48–54, 1972.*)

Respiration

PIERRE ROBIN SYNDROME A child with Pierre Robin syndrome who experienced severe airway obstruction was promptly resuscitated with a simple, nonoperative technique that relieved the pharyngeal negative-pressure problem frequently associated with this syndrome. The method provides protracted airway patency by utilizing nasoesophageal intubation with a small-caliber, soft, plastic catheter. In effect, it presents the high-pressure posterior pharyngeal negative pressure, caused by repeated swallowing and sucking, which pulls the tongue into the posterior pharynx and leads to airway obstruction. The nasoesophageal tube may be inserted quickly as an emergency measure and may be replaced easily if dislodged. The authors suggest that it be used for weeks or months to eliminate the need for a tongue traction procedure, often associated with significant risk during the neonatal period.

The plastic nasopharyngeal tube should be considered the first method of treatment of airway obstruction in infants with Pierre Robin syndrome; operative procedures should be delayed for several weeks, and then be performed only if necessary. (*Stern, L. M., and others: Management of Pierre Robin Syndrome in Infancy by Prolonged Nasoesophageal Intubation. Am. J. Dis. Child. 124: 78, 1972.*)

CNS Function

HYPERVENTILATION IN COMA Twenty-seven patients with severe head injuries were treated with mechanical hyperventilation (Pa_{CO_2} 22–30 mm Hg, pH 7.50–7.60). Hyperventilation was begun as soon as possible after admission and continued for three to 18 days. This group of patients was compared with a control group of 90 patients treated without hyperventilation. All other treatment was the same in the two groups. Mortality of patients with bulbar syndromes remained high in both groups (82 per cent of hyperventilated and 94 per cent of non-hyperventilated patients died). Patients with mesencephalic syndromes, on the other hand, recovered consciousness much faster in the hyperventilated group, and the mortality rates were lower (37.5 per cent hyperventilated *vs.* 68 per cent non-hyperventilated). EEG monitoring throughout the period of hyperventilation and during weaning proved to provide the best early indication of the prognosis. The salutary effects of hyperventilation are ascribed to an increased cerebral oxygen supply (*i.e.*, diminution of luxury perfusion in the nonreactive blood vessels), decreased edema and intracranial pressure, including improvement in acidosis and cerebral metabolism. (*Bricolo, A., and others: Clinical and EEG Effects of Mechanical Hyperventilation in Acute Traumatic Coma. Eur. Neurol. 8: 219, 1972.*)