

STATUS ASTHMATICUS Blood gases were studied in 45 episodes of status asthmaticus in 32 infants and children. The PaCO_2 was as high as 168 mm Hg, the pH as low as 6.89, and significant arterial hypoxemia and metabolic acidosis were frequently present. Respiratory failure associated with PaCO_2 values of 65 mm Hg occurred in 13 patients (18 episodes); all were managed successfully by mechanical ventilation. Repeated assessment of arterial pH and blood gases is mandatory for optimal management of these patients. (Downes, J. J., and others: *Arterial Blood Gas and Acid Base Disorders in Infants and Children with Status Asthmaticus*, *Pediatrics* 42: 238 (Aug.) 1968.)

MICROGNATHIA WITH CLEFT PALATE Micrognathia with cleft palate constitutes a severe hazard to the newborn and, even in this decade, reports are found presenting mortality figures in the vicinity of 50 per cent for this condition. Respiratory obstruction, often not severe until after the first week of life, is the most hazardous feature of this syndrome. Repeated episodes of asphyxia produce first cyanosis and excessive salivation, then lead eventually to substernal retraction and finally to aspiration and bronchopneumonia. The hypoxic attacks may continue until four or five months of age. Treatment to prevent mortality or prolonged morbidity must be implemented as soon as the asphyxial episodes are diagnosed. Considerable speculation has been made about the origin of the asphyxial spells. Shukowsky (1911) labelled the condition congenital stridor and ascribed the cyanotic spells to backward displacement of the tongue. His treatment of the glossoprotic problem was suturing the tongue to the lower lip. Numerous surgical methods of overcoming the respiratory obstruction have been reported. These vary from forward wire traction on the mandible, or anchorage of the tongue in a protruded position by transmandibular pinning, to transposition of the masseter muscles to the inner surface of the angles of the mandible. All these surgical techniques require intubation anesthesia, a difficult procedure on a micrognathic baby, and one that predisposes to postoperative respiratory complications. Acute bronchopneumonia in the underdeveloped baby is almost invariably fatal.

Because of the danger of bronchopneumonia, tracheostomy has also been condemned as a method of treatment in these cases. Nonsurgical treatment has been utilized for "orthostatic feeding" to avoid choking. Gravity alone is insufficient to hold the tongue forward in severely micrognathic cases unless special attention is given to provide cradle-like support, in the prone position, for the infant. Nursed with such support, the tongue and mandible may fall forward by their own weight. (Poswillo, D.: *The Aetiology and Surgery of Cleft Palate with Micrognathia*, *Ann. Roy. Coll. Surg. Eng.* 43: 61 (Aug.) 1968.)

OXYGEN SATURATION An investigation was carried out in 26 patients in an intensive care unit to determine to what extent indirect determination of PO_2 , calculated from directly-measured oxygen saturation and pH using the Rahn and Fenn oxygen-carbon dioxide nomogram, could replace direct measurements of PO_2 in central venous and arterial blood. In central venous blood samples the PO_2 differences were not more than ± 5 torr; in arterial blood, differences were small (± 6 torr) to 90 per cent saturation. Since the indirect method becomes unreliable at oxygen saturations greater than 90 per cent, it cannot replace direct measurement. (Engel, K., and others: *Evaluation of PO_2 and O_2 Saturation in the Blood of Poor-risk patients*, *Der Anaesthesist* 17: 76 (March) 1968.)

OXYGEN CONVULSIONS Intraperitoneal injections of gamma-aminobutyric acid (GABA), glucose or urea prior to exposure to hyperbaric oxygen all delayed onset of convulsions in rats. GABA was the most protective agent and at lower dosage levels was the only agent to delay appreciably the onset of convulsions. Anticonvulsant effects of both GABA and glucose were observed with thiosemicarbazide but not with picrotoxin or pentylenetetrazol. Brain dehydration did not appear to play an important role in the anticonvulsant action. (Wood, J. D., and Watson, W. J.: *Effect of Intraperitoneal Injections of Hyperosmotic Solutions on Convulsions Induced by Drugs and Hyperbaric Oxygen*, *Canad. J. Physiol. Pharmacol.* 46: 649 (July) 1968.)