

## References

- Gray, T. C., and Rees, G. J.: The role of apnoea in anaesthesia for major surgery, *Brit. Med. J.* 2: 891, 1952.
- Dundee, J. W.: Influence of controlled respiration on dosage of thiopentone and *d*-tubocurarine chloride required for abdominal surgery, *Brit. Med. J.* 2: 893, 1952.
- Geddes, I. C., and Gray, T. C.: Hyperventilation for maintenance of anaesthesia, *Lancet* 2: 4, 1959.
- Katz, R. L., and Wolf, C. E.: Neuromuscular and electromyographic studies in man: Effects of hyperventilation, carbon dioxide inhalation and *d*-tubocurarine, *ANESTHESIOLOGY* 25: 781, 1964.
- Freund, F., Roos, A., and Dood, R. B.: Expiratory activity of the abdominal muscles in man during general anesthesia, *J. Appl. Physiol.* 19: 693, 1964.
- Agostoni, E.: Diaphragm activity and thoracoabdominal mechanics during positive pressure breathing, *J. Appl. Physiol.* 17: 215, 1962.
- Bishop, B.: Abdominal muscle and diaphragm activities and cavity pressure breathing, *J. Appl. Physiol.* 18: 37, 1963.
- Downes, H.: Hyperventilation and abdominal reflex inhibition in the rat, *ANESTHESIOLOGY* 24: 615, 1963.
- Inman, V. T., Ralston, H. J., de C. M. Saunders, J. B., Feinstein, B., and Wright, E. W.: Relation of human electromyogram to muscular tension, *Electroenceph. Clin. Neurophysiol.* 4: 187, 1952.
- Fink, B. R.: A method of monitoring muscular relaxation by the integrated abdominal electromyogram, *ANESTHESIOLOGY* 21: 178, 1960.
- de Jong, R. H., Freund, F. G., Robles, R., and Morikawa, K.: Anesthetic potency determined by depression of synaptic transmission, *ANESTHESIOLOGY* 29: 1139, 1968.
- Fink, B. R., and Schoolman, A.: Arterial blood acid-base balance in unrestrained waking cats, *Proc. Soc. Exp. Biol. Med.* 112: 338, 1963.
- Kirstein, L.: Early effects of oxygen lack and carbon dioxide excess on spinal reflexes, *Acta Physiol. Scand.* 23, Suppl. 80: 1, 1951.
- Esplin, D. W., and Rosenstein, R.: Analysis of spinal depressant actions of carbon dioxide and acetazolamide, *Arch. Intern. Pharmacodyn.* 143: 498, 1963.
- Kalow, W.: The influence of pH on ionization and biological activity of *d*-tubocurarine, *J. Pharmacol. Exp. Ther.* 110: 433, 1954.
- Payne, J. P.: The influence of carbon dioxide on the neuromuscular blocking activity of relaxant drugs in the cat, *Brit. J. Anaesth.* 30: 206, 1958.
- Frederickson, E. L., and Schenk, E. A.: Response of neuromuscular junction preparations to changes in oxygen and CO<sub>2</sub>, *Fed. Proc.* 18: 463, 1959.
- Johansen, S. H., and Osgood, P. F.: Influence of hypercarbia on the activity of neuromuscular blocking agents in the cat, *Acta Pharmacol. Toxicol.* 19: 212, 1962.
- Gamstorp, I., and Vinnars, E.: Studies in neuromuscular transmission I. Influence on neuromuscular transmission of alkalosis and acidosis, *Acta Physiol. Scand.* 53: 142, 1961.
- Gamstorp, I., and Vinnars, E.: Studies in neuromuscular transmission III. Influence of changes in blood pH and carbon dioxide tension on the effect of tubocurarine and dimethyl tubocurarine, *Acta Physiol. Scand.* 53: 160, 1961.
- Katz, R. L., Ngai, S. H., and Papper, E. M.: The effect of alkalosis on the action of the neuromuscular blocking agents, *ANESTHESIOLOGY* 24: 18, 1963.

## Pediatric Anesthesia

**FETAL HYPOGLYCEMIA** Because of the potentially serious nature of neonatal hypoglycemia (convulsions and death), a study of fetal blood glucose levels during maternal labor was made. Fetal hypoglycemia was defined as a blood glucose concentration of less than 40 mg per cent. This occurred in association with four conditions: retardation in fetal growth, pre-eclampsia, accidental hemorrhage, and maternal hypoglycemia. Two of the eight fetuses with hypoglycemia were stillborn. Fetal blood glucose levels were not related to fetal blood P<sub>O<sub>2</sub></sub> or base excess. Fetal base excess was not altered after injection of 50 g glucose into the mother. The injection of glucagon, one mg, into the fetal scalp increased fetal blood glucose levels to above maternal levels. (Phillips, L., and others: *Fetal Hypoglycemia*, *Amer. J. Obstet. Gynec.* 102: 371 (Oct.) 1968.)