

R. M., and Lakomy, J.: *Combined Peripheral Paralysis of Hypoglossal Nerve after Endotracheal Anesthesia, Der Anaesthetist* 9: 206 (June) 1960.)

GERIATRIC SURGERY In 373 major surgical emergencies in patients 70 years of age or older, 185 operations were performed with a mortality of 29 per cent. Significant pre-existing medical complications were found to be marked hypertension, bronchitis, severe emphysema, congestive failure, fibrillation, aortic or mitral valvular disease, angina, previous myocardial infarction or cerebrovascular accident, paralysis agitans and severe arthritis, especially if treated with steroids. Rapid digitalization, antibiotics and stir up regimes for pulmonary complications, and "sympathetic cajolery" by experienced nurses are all important for recovery. Skilled and experienced anesthesiologists must handle these cases. Local anesthesia does not appear to lessen mortality, but since it promotes speed and gentleness, which are essential, convalescence appears quicker and smoother after its use. Elderly patients do not stand prolonged operations under emergency conditions. (Bolt, D. E.: *Geriatric Surgical Emergency, Brit. Med. J.* 1: 832 (March 19) 1960.)

LOCAL ANESTHETICS Overdosage of local anesthetic agents is the cause of toxic reactions, sensitivity reactions being probably so rare that they can be ignored. In the United Kingdom cocaine, procaine, tetracaine, dibucaine, lidocaine and piperocaine are the only agents readily available. Phenylephrine and cobefrin have not been widely accepted as providing good vasoconstriction with local anesthetic agents. No drug can be implicated as more apt to cause serious post spinal complications. (Bryce-Smith, M. A.: *Local Anesthetic Drugs, Brit. Med. J.* 1: 1039 (April 2) 1960.)

THERAPEUTIC BLOCK Lumbar procaine block therapy was used in combination with other measures in 50 patients with pelvic inflammation. The results were: lytic fall of temperature, decrease of pain, normalization of leucocytes and a slowing down of the erythrocyte sedimentation rate. A considerable re-

duction of infiltrate was noted in 37 cases; in 8 patients no particular effect could be seen. In all patients the indicated changes occurred in the course of 2-5 days after the block. In some patients the block was repeated. The block did not produce any adverse results. (Balyuba, R. I.: *Lumbar Procaine Block According to Vishnevskii's Method in Inflammation of the Female Genital Region, Ata Zdravookhr. Kaz.* 3: 58, 1958.)

THERAPEUTIC PERIDURAL BLOCK In 20 patients with peptic ulcer 2 per cent procaine was injected in the zone D7-8 in an amount of 15-20 ml. Two patients received one block, 13 received two and 5, three blocks. After the block the 'crater' sign disappeared in 9 persons, and in 6, scar changes were found in the region of the former 'crater.' The pains and dyspepsia disappeared, the evacuatory and motor functions of the stomach were normalized and the pylorospasm was abolished. The secretory function was unchanged. The method of peridural block gave no side effects. It may be recommended for use in patients with uncomplicated peptic ulceration. (Andreeva, M. N., and Nikitin, V. M.: *Use of Peridural Block in Treatment of Peptic Ulcer Patients, Trudy I Severo-Zapad. Nauch. Konf. Terap.* (Smolensk) p. 162, 1958.)

PULMONARY STRUCTURE Connective tissue of the lung includes ground substance of connective tissue including basement membrane and reticular, collagen and elastic fibers. Freeze-dry lung preparations show that the noncontiguous cellular layer of the alveoli is covered by a noncellular homogeneous layer next to the air space. Smallest elastic fibers in alveoli, pleura and bronchi are about 80 angstrom units in diameter and have a periodicity of about 150 angstrom units. It is possible that all pulmonary connective tissue contributes to its elastic properties. The lung may be considered primarily as an organ of connective tissue. (Gersh, I.: *Some Non-Cellular Structures of Lung, Amer. Rev. Resp. Dis.* 81: 736 (May) 1960.)

ALVEOLAR SIZE Relative alveolar size was determined in laboratory animals and man using a standardized technique involving fixa-

tion *in situ*, care being taken not to deform or collapse the lungs in any manner. Alveolar depth-width averages ranged from 38.69 micra in the mouse to 166.11 micra in man. Alveolar sizes ranged in an ascending order from the mouse through the baboon, dog, goat, guinea pig, monkey, rabbit and cat to man. The average volume of alveoli in man was ten times that in the dog. (Hartcroft, W. S.: *Size of Pulmonic Alveoli of Common Laboratory Animals and Man, Amer. Rev. Resp. Dis.* 81: 734 (May) 1960.)

ALVEOLAR VESSELS Pulmonic capillaries are 12 to 14 micra in diameter. Arterioles up to three hundred micra in diameter may have capillary branches arising at right angles as well as terminal branches. An alveolus may be supplied by more than one arteriole; several arterioles may supply one alveolus; and one capillary may traverse several alveoli. Capillary anastomoses occur between arterioles. In these vessels the flow may be linear, negatively pulsatile or positively pulsatile or occluded by increased intratracheal pressures. (Knisely, W. H.: *In Vivo Architecture of Blood Vessels Supplying and Draining Alveoli, Amer. Rev. Resp. Dis.* 81: 735 (May) 1960.)

ALVEOLAR WALL Thin sections of human lung examined by electron microscopy showed the capillary endothelium to be continuous with discrete interlocking cellular junctions. The basement membrane was homogeneous and was interposed between endothelium and a continuous cytoplasmic syncytium that lined the capillary on the air side. This layer contained large septal cells which protruded into the air space. (Baker, R. F., and Loosli, C. G.: *Morphology of Alveolar Wall in Human Lung, Amer. Rev. Resp. Dis.* 81: 735 (May) 1960.)

ALVEOLAR PROTEINOSIS Pulmonary alveolar proteinosis emerges as a disease with definite pathophysiological features. Pulmonary function studies show no impairment of ventilatory ability, obstruction to air flow, and moderate decrease in vital capacity. There is a significant loss of functioning lung volume. Blood gas studies indicate pulmonary alveolar

block and venous admixture in arterial blood as the causative agents of pulmonary insufficiency and variable degrees of cyanosis. Histologically there is a relative lack of cellular infiltration or fibrosis in interalveolar septa, and capillary architecture appears morphologically and functionally normal. Alveolar septal cells are increased in size and number, and may be cause of impaired gas diffusion. Large groups of alveolar spaces are filled with a proteinaceous material and explain the cause of physiologic shunting. Diagnosis is made by clinical course, pulmonary function findings, and lung biopsy. Clinical improvement of reported cases is noted with expectorant therapy, inhalation of proteolytic enzymes in form of aerosols, and symptomatic treatment. Steroids are at present contraindicated. Mortality is 30 per cent of reported cases. Exacerbations are common and follow-up lung biopsy is desirable. (Framouw, W., Cathcart, R. T., and Taylor, R. C.: *Physiologic and Clinical Aspects of Pulmonary Alveolar Proteinosis, Ann. Int. Med.* 52: 1177 (June) 1960.)

THAM THAM was found to prevent the hyperventilation and acidosis which normally occurs while breathing 5 per cent carbon dioxide. A change occurs in the respiratory center in alkalosis whereby it responds primarily to an increase in arterial pH instead of an elevation of P_{CO_2} . The end result is the prevention of further alkalosis developing from hyperventilation. (Brinkman, G. L.: *The Use of THAM to Prevent Hyperventilation and Acidosis While Breathing Carbon Dioxide, Amer. J. Med. Sc.* 239: 72 (June) 1960.)

PULMONARY FUNCTION Incremental changes in total mechanical work are a more accurate gauge of the respiratory response to carbon dioxide than are increments of ventilation or oxygen consumption. The response of the respiratory center and muscles of patients with emphysema, when measured in terms of total mechanical work done, is lower than that of normal subjects. In emphysematous subjects with carbon dioxide retention at rest the response is less than that of patients who are normocapnic. (Brodovsky, D., MacDonell, J. A., and Cherniack, R. M.: *Respiratory Response to Carbon Dioxide in Health and Em-*