

currently the dominant species. Nevertheless, we are the descendants of lowly organisms whose rise depended upon their ability to use oxygen, which was a waste product of plant life. Herein lies the basis of the gravest responsibility which is borne by anesthesiologists. (Nunn, J. F.: *The Evolution of Atmospheric Oxygen*, *Ann. Roy. Coll. Surg. Eng.* 43: 200 (Oct.) 1968.)

**RESPIRATORY-TRACT BACTERIA** Expecterated sputum and swabs from the pharynx, trachea and both main-stem bronchi obtained from 100 patients during bronchoscopic examination were cultured. Only one of 18 patients with minimal bronchopulmonary disease yielded a potential respiratory pathogen on bronchial culture. Bronchial swabs from six of 14 patients (43 per cent) who had undergone prior radiotherapy or pulmonary resection contained pathogenic organisms. The respiratory tract below the carina is normally free of potential respiratory pathogens. Changes caused by inflammation, neoplasm or surgery may allow invasion and colonization by these organisms. (Potter, R. T., and others: *The Bacteriology of the Lower Respiratory Tract*, *Amer. Rev. Resp. Dis.* 97: 1051 (June) 1968.)

**BRONCHIAL ATROPHY** Cinefluorobronchographic studies of lungs at necropsy revealed that collapse of medium bronchi on forced expiration occurred near bifurcations of segmental bronchi and was associated with distal diffuse or local atrophy of the bronchial wall. Anatomic emphysema of lung parenchyma alone did not cause any collapse, bronchial atrophy alone was associated with slow collapse, and both conditions were needed to produce rapid collapse. In a continuing study, the severity of collapse correlated with the clinical assessment of expiratory obstruction and the postmortem measurement of loss of predicted one-second forced expiratory volume. Bronchial atrophy and collapse on forced expiration were found in three patients with no clinical evidence of obstructive lung disease and no loss in predicted one-second forced expiratory volume. Bronchial atrophy may be an early lesion in the evolu-

tion of airway obstruction and it may, at times, exist independently of extrabronchial anatomic emphysema. The combination of bronchial atrophy and loss of radial supporting tissue results in severe airway obstruction. (Maisel, J. C., and others: *Bronchial Atrophy and Dynamic Expiratory Collapse*, *Amer. Rev. Resp. Dis.* 98: 988 (Dec.) 1968.)

**DEATH IN CHRONIC AIRWAY OBSTRUCTION** Subjects with clinically diagnosed "emphysema" or respiratory insufficiency have been observed at pathologic examination to have a reduced incidence of myocardial infarction, both acute and old. The explanation proposed for this observation is that the chronic hypoxia and hypercapnia associated with advanced pulmonary disease stimulates development of intercoronary anastomoses resulting in improved coronary collateral circulation. Of 387 subjects over 40 years of age, 232 (60 per cent) were found at autopsy to have moderate or severe coronary arteriosclerosis. Of these, 77 had had chronic airway obstruction, and 155 had not. Acute myocardial infarction was demonstrated in 17 per cent of those with, as compared with 32 per cent of those without, chronic airway obstruction. Evidence of previous myocardial infarction was observed with about equal frequency in the two groups. (Mitchell, R. S., and others: *The Causes of Death in Chronic Airway Obstruction*, *Amer. Rev. Resp. Dis.* 98: 611 (Oct.) 1968.)

**REMOVAL OF BULLAE** Airway conductance, the reciprocal of airway resistance, increases as lung volume increases because of the relationship between lung volume and lung tissue tension. The effects of resection of lung tissue on FRC and airway conductance were studied in: 1) patients with localized lung disease such as carcinoma; and 2) patients with lung cysts or bullous emphysema. In patients in whom lung lobes were resected for removal of localized disease, conductance decreased, as did FRC, with relatively little change in the conductance-volume ratio. In contrast, every patient who underwent bullectomy experienced a decrease in FRC but an increase in airway conductance, with an in-