

Treatment of Massive Pulmonary Embolism. The Role of Pulmonary Embolectomy. *Joseph S. Alpert, Lewis Dexter, James E. Dalen*

Treatment for pulmonary embolism (PE) is either prophylactic or definitive. Prophylactic therapy focuses on preventing further episodes of embolism; definitive therapy aims at removing thrombi already lodged in the pulmonary circulation. It is frequently suggested that patients with massive PE (> 50 percent of the pulmonary circulation occluded) complicated by hypotension (HT) and right ventricular failure (RVF) require pulmonary embolectomy in order to survive. To determine whether pulmonary embolectomy was essential to the survival of such patients, ten years' experience involving 45 patients with angiographically-documented massive PE was reviewed. RVF occurred in 28 (62 percent) patients and HT developed in 19 (42 percent). RVF and HT co-existed in 16 (36 percent) patients. Two patients died of myocardial infarction unrelated to their PE. Eight patients died of PE (mortality = 18 percent): in four patients PE was the primary cause of death and in four patients it contributed to death. Six of 19 patients with HT died (mortality = 32 percent) while only two patients without HT expired (mortality = 8 percent). In none of the eight patients whose deaths were related to PE was embolectomy technically feasible and clinically appropriate. Of 35 patients discharged, 29 (83 percent) were well at follow-up. The six deaths were unrelated to PE. It is concluded that pulmonary embolectomy is rarely technically feasible and clinically appropriate. Prophylactic therapy is the treatment of choice for nearly all patients with massive PE.

Asbestos Disease Resulting from Household Exposure to Occupational Dusts. *Henry A. Anderson; Ruth Lilis; Alf Fischbein; Susan Daum; Irving J. Selikoff*

Household contamination with asbestos dust brought home on the clothes of workmen may occur. Previously, this has been assumed on the basis of reported cases of pleural mesothelioma in individuals whose only asbestos contact could have been by virtue of residence in an asbestos worker's household. We present data demonstrating that pleural-pulmonary reactions under such circumstances may be of common occurrence. We have examined 215 family contacts (wives, children, siblings) of workers employed in an asbestos factory 1941-1954, but not themselves ever occupationally exposed. Radiologic examinations in 1973-1974 showed that approximately 40 percent had changes on x-ray film characteristic of asbestotic disease (interstitial fibrosis, pleural fibrosis, pleural plaques, pleural calcification). In some instances, the index case (workman) was employed for less than one month. The dusts brought home are known to have remained for long periods of time, however; samples of settled dust in the rafters of the homes were found to still contain the factory's asbestos. These findings suggest that environmental contamination from occupational sources may be more widespread than suspected and indicate that appropriate precautions be taken within asbestos workplaces to prevent dissemination.

Clinical Morphologic Correlation of the Use of Glutaraldehyde Treated Valve Grafts. *William W. Angell, Jon C. Kosek*

Our initial experience with the use of formaldehyde heterografts in 30 patients resulted in a 57 percent two-year and 100 percent four-year failure rate. New tanning agents were therefore approached cautiously, and 15 glutaraldehyde-treated valves were inserted into mongrel dogs and observed for up to 18 months. There were morphologic changes similar to those seen with formalin tanning, including macrophage infiltration, thinning, stretching and decreased tensile strength in these animals. There was, however, no instance of functional deterioration and the changes were quantitatively far less than with formalin. Based on this experience, 36 patients have had valve replacement with glutaraldehyde-treated grafts in both the aortic and mitral positions over a four-year period. Six of the original patients have been followed up for 40 months with no single instance of thromboembolism or evidence of valvular deterioration. Postoperative catheterization in this group shows no regurgitation, with good hemodynamic function except for 5-10 mm gradients across 26 mm valves in the mitral position. Two human specimens were available for pathologic examination 11 days and 3 weeks following surgery, and findings have been correlated with those observations made in experimental animals. This curious histologic tissue deterioration in the absence of functional valvular insufficiency warrants an optimistic but cautious attitude toward the more widespread application of this technique to cardiac valve replacement.

The Prevalence of Immediate Skin Test Reactivity in a Representative Community Population and its Relationship to Clinical Disease. *Robert A. Barbee, Michael Lebowitz, Benjamin Burrows*

As part of a longitudinal epidemiologic study of obstructive lung disease, 3574 subjects from the Anglo population of Tucson have participated in a wide range of clinical and laboratory investigations. Subjects three years of age and above (3346) were asked to undergo five prick tests with allergens common to the Tucson area. Ninety-six percent (3197) completed the testing procedure. Reactions were measured by trained observers who were unaware of the randomized allergen-control sequence. Three response levels were identified; high, moderate, and low-none.

The frequency of positive reactions increased with age during childhood and adolescence, reaching a peak in young adults (47.6 percent). It then fell with age to a low of 17.3 percent in subjects over 75 years of age. High reactions were more than three times as common in young adults as in the aged population. No significant sex differences were observed. Both allergic rhinitis and asthma showed a high correlation with immediate skin test reactivity. No correlation was observed, however, with chronic bronchitis or chronic airways obstruction.

These data confirm a close relationship between immediate skin test reactivity and clinical atopic disease. They also suggest the possibility that atopy may be

NOTICE: This material may be protected
copyright law (Title 17 U S code)