Ten-year follow-up of 601 nonsurgical cases of angiographically documented coronary disease

Angiographic correlations

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A group of 601 consecutive patients who had significant coronary artery disease when studied between January 1963 and July 1965, and who were not subsequently operated on forms the basis of this study. A 100%, 10-year follow-up could be achieved.

All available clinical parameters and various combinations of parameters were related to prognosis. In this communication we will discuss only the parameter that had our primary interest, namely the angiographic findings. Five- and 10-year survival rates were 62% and 41% respectively for the entire group. Almost all deaths were of cardiac origin. The coronary arteriograms were first divided according to the number of major branches showing 50% or more narrowing (*Fig. 1*). In patients with single-vessel disease, mortality was relatively low during the initial years of follow-up (2.4% per year during the first 4 years), but became less favorable later (5.2% per year during the next 6 years). Single-vessel obstructions affecting the right coronary artery were associated with a higher survival than those affecting the anterior descending artery (80.8% and 53.7%, 10-year survival respectively). With regard to the localization of isolated obstructions of the anterior

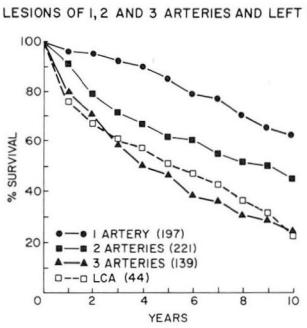

Fig. 1. Lesions of one, two, and three arteries and the left main coronary artery.

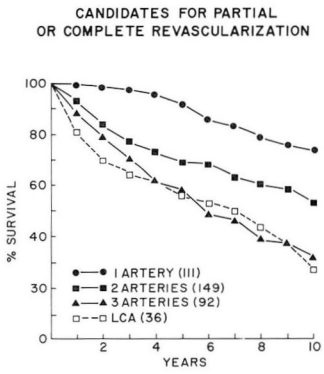

Fig. 2. Candidates for partial or complete revascularization.

descending artery, no difference could be demonstrated between lesions proximal and distal to the first septal perforator and first diagonal branch. The subgroup of isolated circumflex lesions was too small to warrant adequate statistical analysis.

In patients with obstructions of two arteries, 5- and 10-year mortality rates were 61.8% and 45.4% respectively; in those with obstructions of three arteries, survival rates were 46.7% and 23.6% respectively. In these two categories, no statistically significant stratification could be achieved which might partly be accounted for by the small number of patients in various subgroups.

Mortality rates in patients with obstructions of the left main coronary artery were similar to those in patients with three-vessel involvement and seemed unrelated to associated lesions in other branches.

Left ventricular angiograms, performed in 556 cases, were divided into normal, localized impairment, aneurysm, and diffuse impairment. Mortality rates increased in this order and this trend was maintained within the various arteriographic subgroups. However, 10-year survival in patients with left main coronary artery disease was as low in patients with normal ventriculograms (20.8%) as in those with abnormal ventriculograms (26.7%). Retrospectively, 388 of the 601 patients would have been candidates for bypass surgery by current criteria. Survival at 10 years was in the same range in surgical candidates as in the whole group of patients with normal ventricles or localized impairment of contraction (*Fig. 2*). Twenty-eight patients would have been candidates for resection of a ventricular aneurysm with or without a bypass operation. Survival in this group was low (22% in 10 years). To study the influence of removal of patients because of surgical intervention, the data on patients who were operated on during the year 1964 were reviewed (N = 119). This group contained a higher percentage of obstructions of single arteries, most frequently the anterior descending artery, and there were fewer who had diffuse impairment of left ventricular contraction. The impact on prognosis in the entire group of nonsurgical patients is limited and removal for surgery should not affect prognosis in well-defined subgroups.