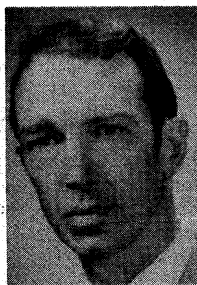


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Current Status

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Although heart valve surgery has come of age, specialists are not yet ready to recommend the procedure for every potential candidate. With any progressive pathologic process, it is fundamentally true that the earlier remedial measures can be instituted the less likely that serious tissue destruction will ensue. Nonetheless, except for some special circumstances, heart valve substitutes—whether of biologic or man-made origin—cannot yet be universally recommended for most patients until the disease process is quite well advanced, because of the remaining inherent risk of such substitutes over a span of years. In many patients for whom this life-saving measure is warranted, there is a remarkable improvement in both the quality and the duration of their life-spans.

After more than a decade and a half of clinical experience with surgical replacement of heart valves, few physicians would question the basic soundness of this approach to the correction of mechanical malfunction of these car-

diac structures. Nevertheless, and despite the impressive clinical results of surgical replacement, not all patients with damaged valves are automatically candidates for this type of restorative procedure.

Theoretically, valvular heart disease would seem to be best treated by replacement of the diseased valve. This is an inherently rational concept. But there are at least two major limiting factors: First, in terms of consideration of patient safety, there must be a valid possibility of replacing the diseased valve by a suitable substitute type in circumstances that carry an acceptable operative risk. Second, the prosthetic valve must be free of intrinsic limitations; or, if it lacks this ideal attribute, it must have an established record of performance far better than the prospect that otherwise awaits the patient based on the natural history of the valvular disease in question.

Given these two conditions, and in the hands of a well-trained, experienced team, your patients with valvular disease, in most cases, can be greatly helped to attain an improved quality of life, as well as prolongation of life. This is compared to the clinical deterioration, long-drawn-out progressive disability and attendant emotional impact, or sudden death, that would be the alternative to surgical intervention.

Our group at the Mayo Clinic recently undertook a reappraisal of the long-term results of 1,684 cases of aortic or mitral valve replacement with a Starr-Edwards type of ball valve prosthesis. We confirmed our impression that this measure does appreciably increase life expectancy over what would otherwise be expected in the natural course of valvular heart disease. Various studies have chronicled the natural course of mitral stenosis and have borne out that, without corrective surgery, the median survival time is only 6-7 years. In the last 5 years of our retrospective survey we found that there had been an overall early operative mortality of 7 per cent; and over the entire survey span of 11 years, the operative mortality rate was 14 per cent.

The early mortality rates noted in this survey were 6 per cent for aortic valve replacement and 9 per cent

PRIMARY CARDIOLOGY