Foster tells us, prolongs the diastole, would be injurious. By delaying the diastole, the ventricle will be all the fuller, and all the longer exposed to dilating forces; while the action of digitalis in producing a more vigorous contraction of the ventricle will only tend to all the sooner ruin the arterial walls. The agent here, if we possessed a drug of such properties, would be one which should lessen the diastole and limit the force of the ventricular systole; the antagonist, indeed, of digitalis. In the early stages of aortic regurgitation, then, digitalis is contraindicated. Such, however, is not the case in the more advanced or later stages.

In order to make this clear it is necessary to trace the further progress of aortic regurgitation. We stopped the inquiry above at the point of massive hypertrophy; we must now follow the downward progress of this pathological process. The arteries, as we saw, became atheromatous from the overdistension to which they are subjected, and they lose their elasticity, and so the arterial recoil is diminished. This would be beneficial in reducing the dilating power of the regurgitant current, if it were not also the fact that the aortic systole is the force which fills the nutrient vessels of the heart itself. The coronary arteries, seated at the base of the aortic column, are filled by the backward flow of the blood on the aortic recoil arrested by the semilunar valves. When, then, the aorta loses its elasticity, and the recoil is lessened, this loss of arrest in the backward flow of the blood leads to imperfect filling of the coronary vessels, and the nutrition of the heart-walls is impaired. Consequently, the hypertrophy of aortic regurgitation, though the most massive, is the least durable of all conditions of hypertrophy. Mauriac has pointed out the why and wherefore of this fleeting hypertrophy; and Balthazar Foster has given a still more brilliant illustration of the subject by showing that, when an aortic valve is ruptured by violence, the duration of the consecutive hypertrophy depends largely on which of the valves is affected. If the torn valve have a coronary orifice behind it, the compensatory hypertrophy is brief, and the downward progress of the case swift; but, if the valves behind which the coronary arteries spring are the uninjured ones, the complete valves arrest to some extent the backward flow, and so the integrity of the muscular walls is maintained and the hypertrophy is more lasting. (*Clinical Medicine*, and *Medical Times and Gazette*, December, 1873.)

When the hypertrophy is being cut down by molecular decay, the consequence of impaired tissue nutrition, the ventricle falters and its contractions are wanting in vigour, the arteries are insufficiently filled, and the coronary flow is still further diminished, leading to still further mural decay. The muscular structure is being undermined, and the ventricle yields once more to the dilating forces of the incoming currents, and not rarely hesitates. The system is insufficiently supplied with blood, and the case progresses rapidly on its downward career. Under these circumstances, the administration of digitalis gives relief, and its use is not only permissible, but beneficial. By exciting more perfect contraction in the faltering ventricle a fuller and better circulation is secured, and the case is tided on for a while. But that is all. When there is also intermittency in the heart's action, and there is a long diastole, during which the dilating forces are in action and the ventricle is almost paralyzed by its long halt, then the administration of digitalis is very beneficial. It not only excites more powerful ventricular contraction, but it does away with the long diastolic halt, and with it the tendency to ventricular paresis. This I have seen in several instances, and notably in a case quoted by my friend Dr. Clifford Allbutt in his well known essay on the *Effects of Overwork and Strain on the Heart and Great Blood-vessels*. Here there was the common double aortic disease, where the regurgitation was marked, and at times the ventricle halted over as many as four beats. The man was already confined to bed, but the rest alone was insufficient to inaugurate improvement. Digitalis and steel soon made a marked difference: the man was up and about in a short time, and got so well that once more he went down the coal-pit to work; it must be said with the most disastrous consequences, for in a few days he was dead.

In advanced aortic regurgitation, digitalis may be given to delay the inevitable end, but more cannot fairly be expected from it. Its use