Historical note

Distribution of myocardial injury and its relation to epicardial ST-segment change after coronary occlusion in the dog

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From 1969 to 1970 I was a fortunate Fogarty research fellow in Professor Eugene Braunwald’s Department at UCSD on the Pacific brim in sunny San Diego.

While John Glenn stepped down on the moon we became friends. My particular undertaking was to develop methods to assess infarct size in order to examine the effect of interventions designed to prevent development of myocardial injury following an acute coronary occlusion. Together with Professor Burton Sobel, I studied myocardial infarction in dogs after coronary occlusion. My particular undertaking was to develop methods to assess infarct size in order to examine the effect of interventions designed to prevent development of myocardial injury following an acute coronary occlusion. Together with Professor Burton Sobel, I studied myocardial infarction in dogs after coronary occlusion.

Assessment of infarct size became an important tool to study pharmacological interventions on infarct evolution with β-blockers [2], inotropic drugs [2], free fatty acids [3] and revascularisation in dogs [4] and subsequently in patients.

![Fig. 1. The relationship between myocardial CPK activity and myocardial blood flow. CPK was measured in homogenates from sub-epicardial (○) and sub-endocardial biopsies (●) from dog hearts 24 h after ligation of the anterior descending coronary artery. Local blood flow was estimated by the distribution of radioactively labelled microspheres in the same biopsy. The regression line (least squares method) characterizing the relationship between the depression of myocardial CPK activity and reduction in blood flow 24 h after coronary artery occlusion is represented.](https://academic.oup.com/cardiovascres/article-abstract/45/1/109/411757)
Based on these interventional studies, β-blocker therapy and revascularisation became effective routine treatment in patients with acute coronary occlusion. The technique also enabled us to define the very short time window effective for treatment for infarct reduction [1,4]. The entrepreneurial activities and scientific results created in the atmosphere of the MIRU-research laboratories was forever valued by a young Norwegian who took the opportunity to spend his wandering years in San Diego at the relentless pace of the Pacific waves in the background. It was a great time for which I am forever grateful to the Fogarty Institution.

References