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Perfuse or Precondition?

To the Editor:—We read with interest the case report about coronary revascularization without cardiopulmonary bypass. In the article, the authors discuss ischemic preconditioning to prepare the myocardium for a 5- to 15-min period of coronary occlusion. The authors cite, "brief periods of occlusion have been shown to paradoxically protect or precondition the heart and to reduce the infarct size caused by a subsequent period of coronary artery occlusion.[1]" The key point is that in undertaking an operation to protect or save myocardium, this procedure already acknowledges that one is going to kill some off—but only a little.

Our question is why precondition? Why not perfuse? In a case report published in another journal, we described the use of a perfusion cannula connected from the side port of a femoral artery DLP cannula.[2] The perfusion cannula is inserted into the coronary artery under direct visualization. This allows oxygenated arterial blood to perfuse the myocardium during the period of anastomosis. This is similar in function to a shunt used during a carotid endarterectomy. It is not necessary to use a femoral perfusion cannula to make this system work; many innovative sites, catheters, and tubing can be used. The key here is the concept of maintaining perfusion to the myocardium during the period of anastomosis to prevent infarction. Minimally invasive cardiac surgery that avoids the use of cardiopulmonary bypass is an important new procedure that will only increase in popularity as new technologies and techniques continue to make it safer and more effective.

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