with evolution from selective right-sided ACP via the right axillary or innominate artery, to routine bilateral ACP. Myocardial protection and management of patent in situ internal mammary arterial grafts was generally in keeping with common practices.

Each of the aforementioned practices is part of a systematic approach to prevention—and preparation for management, should it be needed—of adverse events. That is to say, extensive and thoughtful preparations

were made to tackle challenging cases. To borrow from and modify Benjamin Franklin's quip, this study illustrates that "succeeding to prepare is preparing to succeed."

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See Article page 1390.

Commentary: Is combining two high risk too high risk?

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The impact of previous open-heart surgery on the expected outcome of a subsequent open-heart procedure is well characterized and well recognized by surgeons.¹ The risk of injury to patent grafts and the challenges of myocardial protection can make previous CABG uniquely problematic. Clinical data have corroborated these concerns.^{2,3} Over the last decade, the operative risks associated with previous heart operation have persisted as the risk profile of those undergoing reoperation has increased.^{4,5}

In this edition of *the Journal*, the group from Baylor draws upon their vast experience to quantitate the impact of previous CABG on proximal aortic surgery.⁶ They compare a group with previous CABG who underwent proximal aortic surgery with a propensity-matched group undergoing proximal aortic surgery without previous CABG. Previous CABG provides a unique problem for planning surgery of the ascending aorta, as proximal coronary bypass grafts are

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CENTRAL MESSAGE

In expert hands, previous CABG does not increase the risk of proximal aortic surgery, but the devil still lies in the details.

most commonly anastomosed to the ascending aorta. The authors' data present a trend toward greater rates of operative mortality, 30-day mortality, and stroke but do not achieve statistical significance. The rates are similar to other case series.⁷ The rates of reoperation for bleeding and pericardial effusion requiring drainage, 2 common concerns for reoperative surgery, were no different between groups. The only significant difference between groups was the use of intra-aortic balloon pump. This likely relates to the difficulties of cardiac protection in the setting of a patent left internal mammary artery. Nevertheless, this did not result in a significant difference in mortality. Although falling just short of statistical significance ($P = .06$), there was a trend toward an improved (nearly double) 10-year survival among the patients without CABG. Any difference here likely represents unaccounted comorbidities. The heterogeneity of procedures performed in this study is important to consider. The impact of a previous CABG on a hemiarch with root repair versus an arch repair is clearly different. The rubric of aortic procedure versus previous CABG anatomy results in many variations with too few cases

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to be statically meaningful; therefore, each surgeon must sagaciously consider the individual patient. While caution still justified, these data demonstrate that in highly experienced hands, aortic surgery after CABG is reasonable.

The authors should be commended for their excellent results in this robust addition to their many contributions to the understanding of aortic disease. With a mortality of >10%, proximal aortic surgery is one of the riskiest procedures cardiac surgeons encounter. As the authors state, these data are an important comparison as percutaneous alternatives become available. Although not an absolute contraindication, a 2017 study from the Cleveland Clinic, 35% of 53 patients were considered inoperable for a type A dissection had previous cardiac surgery.⁸ It will take time for endovascular approaches to be a viable option for such patients. The native coronary ostia are a significant limitation to the use of endovascular stents and the ostia of proximal coronary grafts will need clever solutions. It may be a while before we have such luxury; therefore, the present data are a welcome addition to our understanding.

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