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Preoperative Coronary Angiography: Friend or Foe?

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This is a case from an Australian teaching hospital that is a nationally recognized leader in perioperative medicine.

A 54-year-old male with pre-existing well-treated hypertension and type 2 diabetes was seen for preoperative evaluation 10 days prior to laparoscopic hemicolectomy for a stenosing, but currently unobstructed, bowel cancer.

He had suffered exertional dyspnea and 1 episode of chest pain prior to diagnosis, when he was anemic (Hb 65 g/L). This resolved after transfusion and oral iron therapy. Subsequent noninvasive cardiac tests were moderately positive for ischemic heart disease. After transfusion, he had good exercise tolerance.

The anesthetist in the preoperative clinic accepted the patient for surgery without coronary angiogram, on the basis that investigations would not alter management. The procedural anesthetist on the day of surgery disagreed, and sought a cardiology opinion. The first cardiologist suggested proceeding with surgery as planned. A second cardiologist disagreed, and ordered an angiogram. This was then done by a third cardiologist. At angiogram, multiple lesions were demonstrated, of which 2 were angioplastied and stented with bare-metal stents. Cardiologists' opinions then varied as to when it would be safe to cease clopidogrel temporarily for surgery, and for how long.

After discussions between anesthetists, the surgeon, and cardiologists, the patient eventually had surgery (uneventfully) 6 weeks after angioplasty. It is not clear if the patient's coronary artery disease has been optimally treated, as some clinicians believe coronary artery bypass surgery would have been preferable.

This case has been discussed in multiple clinical review forums. Even after these discussions, opinions vary between different anesthetists, between cardiologists, and between surgeons as to the appropriate management. A particular issue is the value (or otherwise) of a preoperative angiogram to demonstrate coronary anatomy when no intervention is planned. The choice between surgical and endovascular treatment of coronary artery disease is also controversial.

After this case, we established a weekly case review meeting involving senior perioperative anesthetists and cardiologists. We are now taking a more proactive, planned approach to cases such as these. Effective communication between surgeon, anesthetists, and cardiologist is crucial.

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