Cardiac anomaly not accounted for prior to surgery
17HDC00159, 15 October 2019

District health board ~ Cardiothoracic surgeon ~ RCA ~ Angiogram ~ Coronary diagram ~ Communication ~ Documentation ~ Right 4(1)

A man in his seventies had a cardiac anomaly whereby his right coronary artery (RCA) did not originate from the usual place in the heart, and it followed a different course to that of most people. A cardiothoracic surgeon performed surgery to replace the man's heart valve but was unaware of the anomaly. During surgery, the surgeon placed a suture (stitch) through the RCA, and this caused poor right cardiac function. The man died following the surgery, and the surgical error was identified at autopsy.

Two weeks prior to the surgery, the man had an angiogram performed by a cardiologist. The cardiologist documented the anomaly in the conclusion section of their report. The cardiologist did not complete a coronary diagram, as this was not a mandatory requirement at the district health board (DHB). The cardiologist handed the case over to another cardiologist to present it for discussion at a combined cardiac meeting (CCM).

The man's case was discussed at the CCM of 10–20 clinicians, including the surgeon, to confirm the surgical plan. While two clinical documents referencing the anomaly were circulated to the attendees, and the angiogram images were viewed at the meeting, the anomaly was not discussed. Following the CCM but ahead of surgery, three further clinical documents were prepared by clinicians other than the surgeon that referenced the anomalous RCA.

The surgeon confirmed that he reviewed the angiogram images and at least three of the clinical documents ahead of surgery, noting that his focus was on confirming the surgical plan from the CCM rather than making a rare diagnosis.

Two anaesthetists subsequently confirmed that they were aware of the anomalous RCA during the surgery, but assumed that the surgical team were already aware of it, so did not discuss it with the surgeon during surgery.

Findings

The man's cardiac anomaly was known by multiple people and recorded in multiple places. There were numerous missed opportunities for the information to be communicated to the surgeon, and these were contributed to by the fact that the DHB did not require completion of a coronary diagram ahead of surgery, and that the purpose of the CCM was not clear to its participants. Notwithstanding the surgeon's personal responsibility in this case, the DHB's system failed to alert the surgeon to relevant and significant information about the man. Accordingly, it was found that the DHB did not provide services with reasonable care and skill, and breached Right 4(1).

It was considered that there were significant failures in the care provided to the man by the surgeon. He did not review the preoperative documentation comprehensively; interpret the angiogram images adequately; identify the RCA ostium during surgery or recognise that it was unusually large; administer antegrade cardioplegia; or document his operation findings adequately. Accordingly, it was found that the surgeon breached Right 4(1).

Recommendations

It was recommended that the DHB create terms of reference for the purpose and effect of the CCM; align a policy, regarding the completion of coronary diagrams ahead of cardiac surgery, with national practice; implement a system to ensure that letters or clinical reports finalised after the CCM but ahead of surgery are forwarded to a central repository to be inserted into the cardiothoracic surgery folder; provide in-house training regarding interpretation of angiogram images; ensure that it is clear to all surgery departments that it is expected that the operating surgeon will read all pertinent documentation ahead of surgery; and provide a written apology to the family.

It was recommended that the surgeon undertake training on angiogram interpretation, and provide a written apology to the family. It was also recommended that the Medical Council of New Zealand consider whether a review of the surgeon's competence is warranted.