

Peer Review File

Article information: <https://dx.doi.org/10.21037/amj-22-106>

Reviewer A

Here I share with you and with the Authors my thoughts and conclusions.

Although the manuscript is well written, the topic looks to me slightly dated. The fact that most of the references cited by the Authors are from the eighty's and ninety's, seems to confirm my impressions. Don't get me wrong, the topic is of interest, but probably not suitable for a Journal. A systematic review should be expected on a topic, in which a number of key issues are still debated or a consensus is missing. The topic dealt by the Authors seems to be more appropriate for educative purposes, rather than for publication, since its content should belong to any cardiac surgeon, being part of his/her wealth of knowledge. Although in some cases (like, for instance, the new onset of coronary stenoses, following an aortic valve replacement), the pathophysiological mechanism is unclear (whether caused by selective cannulation, intima proliferation or genetic disorders), the present review seems to lack an added value.

Reply: We are grateful to the learned reviewer for his/hers insightful comments. A systematic review will be an ideal publication. However, the published literature predominantly consists of case reports and case series. Hence, at present it is not possible to publish a systematic review. We have written a narrative review summarizing all available evidence on the topic and currently such a comprehensive review is lacking. We will also like to highlight that only 7 of the 32 references cited are from the 80s and 90s. The remaining references are from 2000 onwards and there are several from 2020 to 2022. The references from 80s and 90s are seminal papers and must be cited in any publication dealing with the issue of iatrogenic coronary artery injuries.

No changes made in the text.

Reviewer B

It is well written manuscript regarding iatrogenic coronary injury after non- coronary cardiac surgery. The injury was classified based on the anatomical features such as aortic, mitral etc. There are several points I would like to mention as below.

Reply: We are thankful to the esteemed reviewer for their useful comments aimed at further improving the quality of our manuscript. We have incorporated all the changes suggested by the reviewer and responded point by point to the comments.

#1 In the section of injury during mitral surgery, please mention that left dominant system is one of major well-known risk factor and preoperative angiography is important to avoid the incident (Hiltrop al. Circumflex coronary artery injury after mitral valve surgery: A report of four cases and comprehensive review of literature. Catheterization and cardiovascular intervention 89:78-92(2017))

Reply: We have included this information in the section of injury during mitral valve surgery.

Change: Page 4, lines 23-25 & Page 5, lines 1-2.

#2 In management section (lines 144), it would be better to treat patients in the hybrid OR, ideal environment where, two treatment modalities are available such as PCI and CABG. If you can add preference of treatment option due to hemodynamic status, it would better be summarized.

Reply: We have included this information in the management section.

Change: Page 7, lines 23-25.

#3 Adding the mechanism of coronary occlusion with thromboembolism after cardiac surgery. ACKAH et al. Acute coronary occlusion after surgical replacement of the aortic valve treated with emergency off-pump coronary artery bypass grafting. J card Surg. 2021;1-4

Reply: We have included this information in the management section.

Change: Page 3, lines 23-25.

Reviewer C

The authors have nicely described the major coronary artery injuries during different procedures. This article will be of great interest to journal readers. This article will be great reference to cardiology physicians and fellows in training as they may not have adequate exposure to cardiac surgery but are involved in post operative care. It will also serve as great resource for all the critical care and other group physicians in general.

Reply: We are grateful to the learned reviewer for his/hers supportive comments.

Minor comments:

Adding pictures will make the paper more presentable.

Reply: We have included a picture showing occlusion of left main stem and right coronary ostium by an oversized mechanical prosthetic aortic valve in the same patient.

Although there is limited review available on this topic, does this review have any significant novel points that differentiates from rest of them.

Reply: This narrative review is the most comprehensive review that summarizes all available evidence on the topic.

Reviewer D

In this review article entitled "Iatrogenic Coronary Artery Injuries during Non-Coronary Artery Adult Cardiac Surgery" authors have described the various mechanisms of coronary artery injuries from different cardiac surgeries and their clinical presentation. Article also highlights the importance of timely recognition of these injuries in order to implement appropriate therapeutic interventions. Overall article provides a comprehensive overview of the topic.

Reply: We are grateful to the esteemed reviewer for his/hers supportive comments.

Page 4 line 122: Air embolization can be omitted.

Reply: Air embolization has been omitted.

Additional Pictures would allow readers to visualize better.

Reply: We have included a picture showing occlusion of left main stem and right coronary ostium by an oversized mechanical prosthetic aortic valve in the same patient.