

Use of intracoronary shunt

Intrakoronar şant kullanımı

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We read the article by Tufekci et al.^[1] with a great interest. We believe that we may have some contribution to this study. As this study revealed, the intracoronary shunt is only found to be effective on vessels with stenosis, rather than occluded ones. This is why the intracoronary shunt is used commonly on vessels with some degree of stenosis in our daily practice. The use of shunt on totally occluded vessel is not, indeed, necessary. In this study by Tufekci et al.,^[1] we believe that group 3 and 4, which included totally occluded vessels, are not essentially needed in the study design. The authors also found no significant difference between these groups in their study.

Off-pump coronary artery bypass grafting (CABG) has many favorable effects on inflammatory parameters, compared to on-pump procedures, as this fact was repeatedly shown in many studies.^[2] Although off-pump CABG is not entirely safe, it can still induce inflammation as theoretically explained with ischemia-reperfusion injury in myocardium after revascularization of occluded vessels. It is also reasonable to assume that the intracoronary shunt can improve reperfusion injuries on myocardium after revascularization of stenotic vessels, since it allows continuous flow during anastomosis. Is this a potential benefit of the intracoronary shunt?

We would like to highlight another common technical mistake as well. Indeed, this mistake is very common in numerous studies. It is the timing of tests for ischemia parameters postoperatively. As Tufekci et al. suggested in their study, the troponin levels were checked on 24th hour postoperatively after ischemia. On the other hand, troponin levels start to elevate on 2-4th hour after an

ischemic event and reach to peak levels at 12th hour, and start to subside to normalize within a week.^[3-5] Hence, is not it reasonable to test for the troponin levels on the 12th hour after ischemia? We are looking forward to hearing authors' opinions on this issue.

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Author Reply

Dear Editor,

We are grateful for the contribution entitled "Use of intracoronary shunt" made for our article entitled "A prospective study on indication of intracoronary shunt during off-pump coronary bypass grafting surgery for single-vessel disease."^[1]

Intracoronary shunts were found to be beneficial during off-pump coronary artery bypass grafting (OPCABG) operations in patients with an isolated left anterior descending (LAD) coronary artery lesion.^[2] In his experimental study, Dapunt et al.^[3] reported that



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intra-LAD shunt insertion remarkably preserved the myocardial energy stores compared to LAD occlusion and suggested that intracoronary shunt insertion improved the protection of myocardium during off-pump revascularization. Similar findings have been also reported by Gurbuz et al.^[4] and Bozok et al.^[5] The protective effect of the intracoronary shunt on myocardium demonstrated by these studies may constitute a basis for its usage in OPCABG surgery.^[3-5] Patients with total occlusion may not be the ideal candidates for the intracoronary shunt. However, attributed to the potential benefits documented in relevant publications, we used intracoronary shunts in groups 3 and 4 in our study.^[2-5]

Repetitive measurements of cardiac markers may probably allow a better assessment of their postoperative release. Sadony et al.^[6] reported that a cardiac troponin I value at 24th hour had a sensitivity of 100% and a specificity of 97% for the discrimination of patients with and without perioperative myocardial infarction. Thus, we evaluated troponin levels at 24 hours following the intervention.

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