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INTRAOPERATIVE GRAFT ANGIOGRAPHY AS A METHOD OF ANASTOMOSIS QUALITY CONTROL POST CORONARY ARTERY BYPASS GRAFTING PROCEDURE

Poster Contributions
Poster Hall, Hall A/B
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Session Title: New Techniques and Indications For Coronary Angiography
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Background: One year venous graft occlusion post coronary artery bypass grafting procedure (CABG) occurs in approximately 30% of the cases. Importantly, anastomosis defects during CABG can be responsible for 5 to 20% of graft occlusions. We conducted a prospective study of safety and efficacy of intraoperative graft angiography (IGA) post GABG to assess graft patency and quality.

Methods: A total of 602 patients who underwent elective CABG participated in the study. IGA routinely was performed in all patients immediately after CABG. Graft defects were repaired with or without repeated cardiopulmonary bypass. Early outcome such as anastomosis defects and late outcomes such as survival, repeat revascularization, acute myocardial infarction (AMI) and stroke rates were evaluated. Survival curves were performed for the combined end-point parameter.

Results: Graft defects were found in 12% of the cases (n=73),(LIMA -24 grafts, venous-49 grafts) after which they were repaired in 10.6% (n=64),(LIMA - 24 grafts, venous- 40 grafts). In the remaining 9 venous graft cases defects were not corrected due to technical difficulties. There were no complications associated with IGA including bleeding, acute renal failure or allergic reactions. In-hospital mortality rate was 0%. Follow-up period was 28.4 (15;41) months, (Me(Q1;Q2)). The overall mortality rate was 0.7%, AMI rate - 1.8%, repeat revascularization rate - 4% and stroke rate - 2.6%. Based on the survival curves freedom from MACE was 83.5%.

Conclusion: IGA is a safe diagnostic method for assessing the quality of anastomoses post CABG. The results of our study suggest that immediate anastomosis defect rate is 12% and majority of these anastomoses (10.6%) can be repaired immediately. Perhaps, by improving the quality of anastomoses we may decrease the AMI, mortality and repeat revascularization rates post CABG.