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Analysis of Myocardial Ischemia Parameters after Coronary Artery Bypass Grafting with Minimal Extracorporeal Circulation and a Novel Microplegia versus Off-Pump Coronary Artery Bypass Grafting

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To compare the performance of our institutionally refined microplegia protocol in conjunction with minimal extracorporeal circulation system (MiECC) with off-pump coronary artery bypass grafting (OPCAB).; We conducted a single center study including patients undergoing isolated CABG surgery performed either off-pump or on-pump using our refined microplegia protocol in conjunction with MiECC. We used propensity modelling to calculate the inverse probability of treatment weights (IPTW). Primary endpoints were peak values of high; -, sensitivity cardiac troponin T (hs-cTnT) during hospitalization, and respective first values on the first postoperative day. Endpoint analysis was adjusted for intraoperative variables.; After IPTW, we could include 278 patients into our analyses, 153 of which had received OPCAB and 125 of which had received microplegia. Standardized differences indicated that treatment groups were comparable after IPTW. The multivariable quantile regression yielded a nonsignificant median increase of first hs-cTnT by 39 ng/L (95% CI -8 to 87 ng/L.; p; = 0.11), and of peak hs-cTnT by 35 ng/L (CI -13 to 84.; p; = 0.11), and of peak hs-cTnT by 35 ng/L (CI -13 to 84.; p; = 0.11), and of peak hs-cTnT by 35 ng/L (CI -13 to 84.; p; = 0.11), and of peak hs-cTnT by 35 ng/L (CI -13 to 84.; The use of our institutionally refined microplegia in conjunction with MiECC was associated with similar results with regard to ischemic injury, expressed in hs-cTnT compared to OPCAB. MACCE was seen equally frequent. ICU discharge was earlier if microplegia was used.

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