

Long Term Complications and Predictors for Intra Aortic Balloon Counterpulsation (IABC) Removal after Prolong Support: The ABCD-1 Trial

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Background: IABC still holds a risk for complications despite technical advances. Late complications and predictors for its removal after prolong support remain unclear.

Objectives: To assess the complications and predictors for IABC removal after prolonged use of the device.

Methods: We collected data from computerized medical records of 162 consecutive patients who underwent IABC insertion between the years 2004- 2008.

Analysis was performed after dividing the number of days with balloon support into 2 groups: < 4 days (group 1) and \geq 4 days (group 2).

Results: 109/162 (67.2%) pts were in group 1 (mean age 66.8 ± 14.1) and 53/162 (32.7%) pts were in group 2 (mean age 67.8 ± 11.4).

Group 2 had more diabetes mellitus ($p < 0.02$), prior stroke ($p < 0.08$) and renal failure ($p < 0.04$). Indications for IABC insertion were similar in both groups except for pulmonary edema which was higher in group 2 ($P < 0.08$). Large proportion of patients in group 2 received concomitant clopidogrel and IIb/IIIa antagonists ($p < 0.06$). Limb ischemia occurred only in 5 pts (3.1%) with no difference between groups. During the hospitalization period, patients in group 2 had more infections ($p < 0.0001$), CHF ($p < 0.0001$), major bleeding events ($p < 0.07$) and acute renal failure ($p < 0.0001$). Multivariate regression analysis showed that the use of clopidogrel was the significant predictor for IABC removal ($p < 0.05$) after prolonged support due to increased bleeding tendency.

Conclusion: The main reasons for IABC removal after prolong use are increased bleeding due to clopidogrel treatment, infectious complications and acute renal failure. Vascular complications were lower than expected.