DETERMINANTS OF DE NOVO POSTOPERATIVE ATRIAL FIBRILLATION: INDIAN EXPERIENCE

Background : Post operative Atrial fibrillation (AF) is a known and dreaded complication after cardiac surgery and causal factors for DENOVO atrial arrhythmia has been a mystery and the never ending quest for the risk factors continues .The aim of this retrospective single centre study was to evaluate the incidence and risk factors of postoperative de novo atrial fibrillation (POAF) in indian population between 2015- 2018 in our institute

Methods:. Medical records of 4831 patients who underwent cardiac surgery between 2015 -2018 were included. They were evaluated with respect to preoperative factors like age, left ventricular ejection fraction (LVEF), nature of surgery ,preop renal dysfunction , COPD, diabetes ,increased TLC , IABP. Intraoperative factors like cell saver use and postoperative factors like occurrence of stroke , hospital stay and mortality were also studied.

Results: Of the 4831 patients who underwent cardiac surgery, Denovo AF developed in 847 patients accounting to incidence of 17.5 %. Mean age of New-onset AF was 62.5 +10.6 , 21.6% were females ,mean LVEF was 47.2+12.1%. There was a positive association of emergency surgery with AF occurrence 4.37 % in AF group vs 1.98 % in no AF group. No difference in cell saver use (P=0.869) and ejection fraction was found in our study (P=0.067) and no change in incidence of stroke (P=0.072)The mortality rate is significantly higher statistically ($p < 0.05$). Univariate analysis identified the following predictors of DE NOVO postoperative AF: older age group, female gender , history of renal dysfunction, type of surgery routine or emergent , use of IABP , COPD ,high ionotropes ,preop ventilation requirement and increased TLC . The short-term postoperative mortality rate was 12% as compared with 5.8% who did not develop AF. The duration of ICU, HDU and hospital stays were statistically longer ($p < 0.001$) with higher rates of ICU readmissions and reintubations seen.

Conclusion: We conclude that the incidence of POAF in indian experience is lesser comparable to the figures in Western countries. Sincere Strategies to reduce the incidence of AF after cardiac surgery has favorably affect surgical outcomes and reduce utilization of resources and thus lower cost of care.

Keywords - De novo AF, Indian population , cardiac surgery , risk factors.