INCIDENCE OF DE NOVO ATRIAL FIBRILLATION IN POSTOPERATIVE CARDIAC SURGICAL PATIENTS : AN 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. 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. Intra operative 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 whereas it was 58.7± 11.6 in patients without AF. 21.6% were females in AF group and 17.2% in No AF group ,mean LVEF was 47.2± 12.1%. in AF group and 48.1± 11.8 in No AF group. 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.

Conclusion: We conclude that the incidence of POAF in Indian experience is lesser comparable to the figures in Western countries . Sincere Strategies and protocol based approach has reduced the incidence of AF after cardiac surgery has favorably affect patient outcome

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