**INCIDENCE OF ACUTE CELLULAR REJECTION AFTER HEART TRANSPLANTATION AND ITS IMPACT ON ONE-YEAR SURVIAL: A REPORT FROM TERTIARY CARE HOSPITAL IN THAILAND**

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**Introduction**: Acute cellular rejection (ACR) remains a major problem after heart transplantation (HT). The risk of death after transplantation is highest during the first year, and ACR accounts for 10% of those deaths. However, there is scant amount of evidence of survival of ACR patients during the first year after transplantation.

**Objective:** To investigate the incidence of ACR and survival after one year in patients post heart transplantation in Thailand.

**Method:** This was a cohort, prospective study of consecutive patients who underwent heart transplantation between January 2008 and September 2017 in a tertiary care, academic hospital in Thailand. Diagnoses of rejections were made by scheduled surveillance endomyocardial biopsies (EMBs), as well as additional EMBs as clinically indicated, graded according to ISHLT 2004 guideline. One-year survival analysis of patients after heart transplantation in relation to ACRs was done. T-test and Fisher exact test were used for analysis.

**Results:** Of 69 patients who underwent heart transplantation during the study period, total of 60 patients had undergone at least one EMB and were included for analysis (mean age of 40.3 years and mean follow up time of 2.4 years). The incidence of ACR grade 1R and ACR grade 2R/3R were 72.3% and 29.2% respectively, with 60% for grade 1R ACR and 18.3% for grade 2R ACR occurred within the first year after transplant. One-year survival was lower among HT patients with 1R ACR within the first year compared to those without (log-rank p = 0.017), whereas one-year survival among patients with 2R/3R ACR within one year was not statistically different compared to those without (log-rank p > 0.05).

**Conclusion:** The incidence of ACRs that require rejection treatment within one year was relatively high comparable with other studies. The finding emphasizes the importance of frequent EMBs during the first year post-transplantation. However, ACR after heart transplantation did not clearly associate with higher mortality.