[gw22-e0601] **EFFECT OF SMOKING ON CLINICAL OUTCOMES OF HOSPITALISED FEMALE SMOKERS WITH ACUTE MYOCARDIAL INFARCTION**

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Background: Although the prevalence of smoking among Chinese women was 2.4%, it is still increasing in many cities. Smoking is known to be a strong risk factor for premature atherosclerosis, acute myocardial infarction (AMI) and sudden cardiac death. Up to date, the relation between smoking and AMI in Chinese female smokers is still unclear. This study described the baseline characteristics for female smokers hospitalised with AMI and investigated the effects of cigarette smoking on their clinical outcomes.

Methods A total of 393 women aged 18 years or over with AMI was prospectively recruited from 1 January 2007 to 31 December of 2009 from a tertiary hospital. Patients were grouped into smokers and non-smokers. The relationships between baseline characteristics and clinical outcomes were tested using either the χ^2 test for trend for discrete variables or analysis of variance for continuous variables.

Results Smokers accounted for 100 (25.4%) with the significantly lower prevalence of hypertension, diabetes mellitus and hyperlipidaemia than non-smokers ($p<0.05$). The proportion of premenopausal smokers was higher compared to premenopausal non-smoker, (11% vs 3.4%, p=0.006). The smokers were average 1.3 years younger than non-smokers with no significant difference (65.89±10.72 vs 67.18±9.10 p=0.243). However, when all patients with any other cardiovascular risk factors such as hypertension, diabetes mellitus and hyperlipidemia were removed, in the left smokers were average 4.7 years younger than non-smokers with significant difference (64.37±12.24 vs 69.11±9.54, p=0.036), and had the lower rate of effort angina before the first AMI (14% vs 39.6%, p=0.005), had the higher rate of TIMI flow grade 2 or 3 after thrombolytic therapy (50.0% vs 16.7%, p=0.008) and severe arrhythmia (14.0% vs 1.9%, p=0.043). The heart failure rate and mortality of the smokers with or without the other cardiovascular risk factors had no significant difference compared to non-smokers (respectively 2.3% vs 3.8%, p=0.579; 14% vs 13.2%, p=0.915).

Conclusion Smoking is a strong risk factor that results in earlier AMI in female smokers with less other cardiovascular risk factors; female smokers with first AMI had no better clinical outcomes than non-smokers.