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The number of coronary risk factors and mortality in patients with acute myocardial infarction from Japanese nation-wide real-world database

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Background: Hypertension, diabetes, dyslipidemia and smoking are so-called coronary risk factors for coronary heart disease, which were established by extensive epidemiological research. However, in Japanese patients with acute myocardial infarction (AMI), the impact of number of coronary risk factors on in-hospital morality has not been elucidated.

Methods: The Japan Acute Myocardial Infarction Registry (JAMIR) is a nationwide real-world database integrated form 10 regional registries. We examined the association between number of coronary risk factors and in-hospital mortality from this JAMIR registry.

Results: The data were obtained from total of 20462 AMI patients (mean age, 68.8±13.3 years old; 15281 men, 5181 women). Figure 1 shows the prevalence of each coronary risk factors stratified by sex and decade. The prevalence of hypertension became higher with the advanced age while the prevalence of smoking became lower with the advanced age. Prevalence of diabetes and dyslipidemia were highest in middle age. Majority (76.9%) of the patients with AMI had at least 1 of these coronary risk factors and, 23.1% had none of them. Overall, except women under 50, number of coronary risk factor was relatively less in older age (Figure 2). In-hospital mortality by sex and decades was shown in figure 3. In-hospital mortality rates were 10.7%, 10.5%, 7.2%, 5.0% and 4.5% with 0, 1, 2, 3 and 4 risk factors, respectively (Figure 4A). After adjusting age and sex, there was an inverse association between the number of coronary risk factors and in-hospital mortality (adjusted odds ratio [1.68; 95% CI, 1.20–2.35] among individuals with 0 vs. 4 risk factors, Figure 4B).

Conclusion: In the present study of Japanese patients with AMI, who received modern medical treatment, in-hospital mortality was inversely related to the number of coronary risk factors.

Figure 1

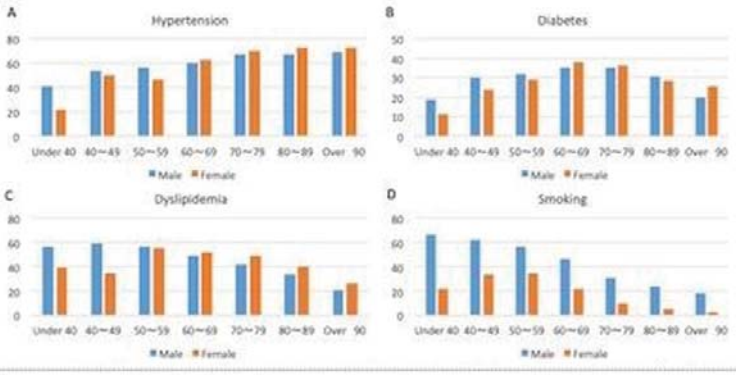

Figure 2

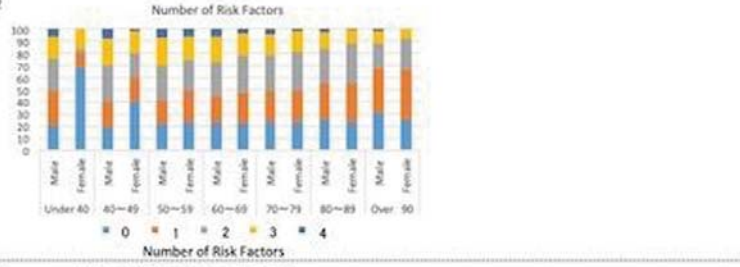

Figure 3

Figure 4