Living in temporary housing is a risk factor for the incidence of metabolic syndrome in tsunami survivors

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Abstract
Objectives: Previous studies have shown an increased prevalence of body weight gain and dyslipidemia after the 2011 Great East Japan earthquake and tsunami. The purpose of this study was to examine the longitudinal changes in prevalence of metabolic syndrome (Mets) in the tsunami survivors. Furthermore, we tried to determine the predictors for the incidence of Mets after the disaster.
Methods: The study subjects of this study was the general population who lived in the tsunami stricken area and participated repeatedly in health check-ups before (2010) and after the event for four years from 2011 to 2014 (n= 2,317, mean age = 64.2 years, male 36.8%). The definition of Mets of this study employed the IDF (International Diabetes Foundation) criteria, and the annual prevalence of Mets during the study period was examined. In addition, using the binary logistic regression analysis, this study determined the predictors including life style changes and living conditions after the tsunami for the new onset of Mets in the post-disaster period.
Results: The prevalence of Mets in the cohort was stable from 30.2% in 2010 to 28.1% in 2014 (p for trend = 0.490). However, a number of new onset of Mets (incident case) was found after the disaster (n=177; men, n =49; women, n = 128). After adjustment of

established risk factors for Mets (central obesity, dyslipidemia, elevated blood pressure, elevated hemoglobin A1c), significant predictor for the incidence of Mets was living in temporary housing after the disaster in both sexes (Odds ratio; men, 2.10; 95% CI 1.03 – 4.29, p = 0.003: women, 1.88; 95% CI 1.22 – 2.90, p = 0.005).

Conclusion: This study suggests that living in temporary housing after the serious disaster might be an independent risk factor for the incidence of Mets in the general population.