

## Impact of east Japan earthquake disaster with massive tsunami for prevalence of Takotsubo syndrome – a multicenter regional registry before and after east Japan earthquake disaster

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**Background:** Previous studies demonstrated Takotsubo syndrome (TS) was easily provoked by earthquake disaster. However, a previous other regional report demonstrated TS was not increased after 2011 east Japan earthquake disaster. The purpose of this study was to clarify incidence of TS after the earthquake disaster in Iwate prefecture during long term period.

**Method:** Consecutive hospitalized TS patients were registered during 8 years between 2009 and 2016 in our medical university and five Iwate prefecture hospitals. Moreover, patients were divided into two groups, i.e., those with the inland and those with tsunami-stricken area groups. Prevalence of TS were calculated by standard incidence ratio (SIR) before and after the earthquake disaster. Moreover, long-term prognosis in the both groups was compared using Kaplan-Meier analysis.

**Results:** A total of 112 TS (male 25 and female 87) were registered from acute coronary syndrome registry in each hospital (n=4,163). Averaged age was 75.3 year-old. A total number of TS just after the two months of the earthquake (March and April 2011) was nine and significance monthly variation was observed comparing with the other months (p=0.029). SIR before and after the disaster is as following Figure. There were no significant differences for long-term prognosis between the two groups (p=0.20).

**Conclusion:** Incidence of TS was increased in acute phase after east Japan earthquake disaster. However, significance increases were maintained during long-term period, although number of TS was decreased after acute phase. TS is increased not only acute but also chronic phase after the serious earthquake disaster.

