

Comparison of Deaths by Fall as Classified by Month in the 23 Wards (municipalities) of Tokyo

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Abstract

Background: Accidental death by fall is one of the major causes of accidental death in Japan. And the number of deaths by fall is higher than that of deaths in traffic accidents. In addition, it is well known that falls are one of the major causes of people becoming bedridden or being unable to return to prior level of activities in daily life. So far, there have been some studies of falls in Japan. However, the relationship between death by falls and temperature in the 23 wards of Tokyo has not been investigated.

Study design: This is an epidemiologic study.

Aim: The purpose of the present study was to compare the number of deaths by fall as classified by month in the 23 wards (municipalities) of Tokyo.

Methods: Monthly data for the number of deaths by fall from January 2002 to December 2014 in the 23 wards of Tokyo were obtained from the Tokyo Medical Examiner's Office official website. Monthly air temperature data for the same period in the 23 wards of Tokyo were also obtained from the Japan Meteorological Agency official website. The effects of month and/or air temperature on the number of deaths by fall were evaluated by ecological study.

Results: The number of deaths by fall and mean air temperature were 20.6 ± 5.9 subjects per month and 16.6 ± 7.5 °C. The number of deaths by fall in December was highest, and significantly higher than in April and September in all subjects. In addition, the number of deaths weakly and negatively correlated with air temperature parameters in all subjects and in men.

Conclusion: These results show that the number of deaths by fall was higher in the winter, especially in December, which suggests that proper education to prevent falls may be needed in the 23 wards (municipalities) of Tokyo, Japan.

Key Words: Deaths by fall, accidental death, the 23 wards of Tokyo, meteorological parameters