Cold Temperature and Cardiovascular Mortality

To the Editor:
The study by Atsumi et al. is of considerable interest. They observed that cold temperature was associated with increased cardiovascular disease (CVD) mortality. Stratification showed that cold temperature had a stronger effect on subjects aged <80 years and those with hyperglycemia. No other differences in the effect of cold temperature on CVD mortality was found between the subgroups according to obesity, smoking habit, alcohol intake and hypertension. A few additional comments might be of interest.

In a large study (n=8,204 patients with stroke) with a long duration (10 years), we reported a seasonal variation in stroke incidence. We found a significant seasonal variation in the occurrence of all strokes, mainly ischemic stroke (IS), with a peak incidence in winter and/or spring and the lowest rate in summer. There was no significant seasonal variation in the occurrence of other stroke subtypes such as intracerebral hemorrhage, subarachnoid hemorrhage and transient ischemic attack. The variation in IS was attributed to cold weather but also to seasonal variations in other CVD risk factors. Peripheral vasoconstriction because of cold weather results in increased sympathetic tone, which contributes to a rise in plasma noradrenaline concentrations and finally arterial hypertension, and high plasma fibrinogen levels and lipoprotein (a) might reinforce this trend.

Susceptible populations should take measures to protect themselves from cold weather.

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References

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