

LETTERS

Snowfall and myocardial infarction. What is the effect of barometric pressure?

The study by Auger and colleagues in *CMAJ* showed that the amount and duration of snowfall was associated with an increased risk of admission to hospital and death due to myocardial infarction (MI) among men from Quebec, Canada.¹ The study apparently did not adjust by barometric pressure; if the data are available, does the inclusion of barometric pressure have a confounding effect or effect modification on the estimates? Some studies have shown that changes in barometric pressure are associated with MI and coronary deaths.²⁻⁴

In the historic snowstorm that hit the eastern United States in January of 1978, barometric pressure in some cities dropped as low as 40 millibars in 24 hours. A blizzard is distinctive because of the fast drop in barometric pressure in a 24-hour period. Three days after the storm of 1978, admissions for MI, total mortality and ischemic heart disease deaths increased in

Rhode Island for the five-day period following the blizzard; however, the effect of barometric pressure was not assessed in that study and the blizzard was considered the only culprit.⁵

A recent Asiatic study found that extreme ambient temperatures were associated with cardiorespiratory mortality. An interesting finding was the decrease of cold effect on mortality by 2.36% associated with an increase in barometric pressure, indicating that it may have an impact on the effect of other weather variables on mortality.⁶ Furthermore, there is evidence of a positive correlation between barometric pressure and blood oxygen saturation.⁷ Patients with MI or ischemic heart disease are particularly susceptible to changes in blood oxygen saturation.

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