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Seasonal variation in lipids in patients following acute coronary syndrome on fixed doses of Pravastatin (40 mg) or Atorvastatin (80 mg) (from the Pravastatin or Atorvastatin Evaluation and Infection Therapy-Thrombolysis In Myocardial Infarction 22 [PROVE IT-TIMI 22] Study).

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Abstract

Previous studies have shown seasonal variation in lipids. To understand whether this variation exists in patients with acute coronary syndromes receiving statins, we examined data from the PROVE IT-TIMI 22 Study. At baseline, no significant difference in low-density lipoprotein (LDL) cholesterol was observed when stratified by season. However, a statistically significant difference in high-density lipoprotein cholesterol between winter (37 mg/dl) and summer (39 mg/dl) was observed (p <0.001) at baseline. On treatment, median LDL cholesterol was 102 mg/dl in winter versus 96 mg/dl in summer (p <0.001) for the pravastatin group and 68 mg/dl in winter versus 62 mg/dl in summer (p <0.001) for the atorvastatin group. Median high-density lipoprotein cholesterol was 43 mg/dl in summer versus 41 mg/dl in winter in the pravastatin group and 42 mg/dl in summer versus 39 mg/dl in winter in the atorvastatin group (p <0.001). More patients achieved LDL cholesterol <100 mg/dl in summer at 56% versus 47% in winter in the pravastatin group (p <0.001) and 89% versus 87% in winter for the atorvastatin group (p = 0.11). Achievement of LDL cholesterol <70 mg/dl was also higher in summer than winter. In conclusion, this was the first evidence of seasonal variability in cholesterol in patients with acute coronary syndromes treated with statins. This variability affected achievement of National Cholesterol Education Program goals and may affect management decisions based on season of collection.

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