Inflammatory Myopathies Linked to Thrombi

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Patients with dermatomyositis or polymyositis are at increased risk for arterial thrombotic events that immunosuppressant use may lessen, according to a case-control study.

These autoimmune diseases are known to cause muscle inflammation, weakness, and significant morbidity. However, there are fewer data on the risk for arterial events in affected patients.

So Dr. Christian A. Pineau and colleagues assessed 607 people with dermatomyositis (DM) or polymyositis (PM). The researchers measured events such as acute myocardial infarction, stroke, and ischemic heart disease in this cohort during a 10-year period.

Patients were identified from the province of Quebec’s physician billing, hospitalization, and pharmacy database. Their average age was 62 years, and women accounted for 70% of the cohort. All patients were beneficiaries of the public drug insurance plan, which covers approximately 42% of the residents of Quebec. The investigators reported their findings in the Journal of Rheumatology (October 31 [doi: 10.1089/ rheum.090061]).

Results suggest a high incidence of arterial events in DM and PM. There were 124 arterial events experienced by 80 patients during the study period. Events included 34 incident cases of acute MI (equivalent to 13.8 per 1,000 person-years). The investigators estimated that they would expect about 17 acute MIs during this time in the same number of people without autoinflammatory disorders so the study cohort’s relative risk was 1.95.

There were 13 strokes during the study (a rate of 5.2 per 1,000 person-years), similar to the rate of 5.1 per 1,000 person-years reported in rheumatoid arthritis (Ann. Rheum. Dis. 2006;65:1608-12). Stroke incidence in the general Canadian population is estimated at 3.1 per 1,000 person-years, suggesting a near doubling of risk for people with one of these inflammatory myopathies.

“As rheumatologists, we should be sensitive to the fact that comorbidities such as coronary artery disease represent a high burden for our patients,” said Dr. Pineau, a rheumatologist at McGill University Health Centre in Montreal.

Nonatherosclerotic heart disease, hypertension, and diabetes are more important determinants of arterial events in the study. For example, risk for an event in someone with a lipid disorder carried an adjusted rate of 4.9; heart failure or valve disease, 3.0; and hypertension, 2.5, according to a multivariate analysis.

In contrast, exposure to nonsteroidal immunomodulators was associated with a significantly lower arterial event rate (adjusted RR, 0.5). “The use of immunosuppressants, which improve disease control and minimize the need for steroids, could in theory have the potential to lower the risk of coronary artery disease,” Dr. Pineau said.

A majority (85% of the cohort) was exposed to systemic glucocorticoids; 26% to disease-modifying antirheumatic drugs (DMARDs) such as hydroxychloroquine or sulfasalazine; 14% to antimalarial drugs; and 6% to cyclophosphamide.

An unanswered question is why the researchers found a higher rate of arterial thrombotic events for people with DM or PM, compared with the general population. “We would be rheumatologists to see all rheumatic diseases in the same light as they see rheumatoid arthritis,” Dr. Pineau said.

Although the use of disease-modifying antirheumatic drugs is the cornerstone of management for many rheumatic diseases, such as rheumatoid arthritis, some DM and PM, many rheumatic diseases such as PM and DM are primarily—and often exclusively—treated with steroids, he said. At the same time, other immunosuppressants take only a secondary role. “As exemplified in this study,” Dr. Pineau concluded, “Drugs could potentially lead to increased cardiovascular risk, either through the toxicity associated with the use of higher steroid doses, or because of a higher inflammatory burden brought upon by a suboptimal control of drugs.”

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