



## 1. Clinically Apparent Arterial Thrombosis in Persons with Systemic Vasculitis.

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As with other autoimmune disorders, inflammation leads to accelerated atherosclerosis, with subsequent arterial thrombosis being a significant adverse outcome.

Our first goal is to compare the rate of arterial thrombotic events in patients with polyarteritis nodosa (PAN) and granulomatosis with polyangiitis (GPA), with that in the general population. Our second goal is to determine if clinical factors within the vasculitis group were associated with an increased incidence of arterial events.

Data was collected from the provincial administrative data (Quebec population) from the years 1996-2003. Incident cases of PAN (ICD 446.0) and GPA (ICD 446.4) were included in the cohort, and age (under 65, over/= 65) and sex-matched controls were taken from general population.

Outcomes included acute myocardial infarction (MI; ICD 410.x) and cerebrovascular accident (CVA - ICD 433.x, 434.x) were assessed longitudinally via hospitalization records within the same administrative data. Outcomes in vasculitis cases were compared to those in the general population. Furthermore, Cox regression analysis was conducted to elucidate any differences in baseline clinical characteristics (sex, diagnosis of hypertension, dyslipidemia, diabetes, congestive heart failure) between the group diagnosed with vasculitis compared to the group without vasculitis. Mean incidence of either AMI or CVA was 10.91% in the overall systemic vasculitis group (n=706) compared to 1.91% in the general population from 1996-2006. Males under 65 y.o. with vasculitis had an 8.26% (CI 95% 3.02-13.51) difference in incidence of myocardial infarction (9.32% vs. 1.06% in the general population). Females under 65 y.o. with vasculitis had a 2.55% (CI 95% 0.34%-4.76%) difference in myocardial infarction (2.80% vs. 0.25% in the general population). In the PAN group, males under 65 y.o. had a 17.46% (CI 95% 2.81-32.11) difference in incidence of myocardial infarction (18.52% vs. 1.06% in the general population). Patients with PAN and GPA have a higher incidence of arterial thrombotic events, with the most significant difference seen in males and females under the age of 65 within the PAN subgroup.

As such, if there is increased risk of arterial thrombotic events in these patients more intense cardiovascular risk factor modification may be undertaken, which will hopefully lead to improved outcomes.