Mortality among Patients with Giant Cell Arteritis: A Large-scale Population-based Cohort Study

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ABSTRACT. ***Objective.*** Studies regarding mortality among patients with giant cell arteritis (GCA) have yielded conflicting results. Thus in this large population-based study we aimed to examine whether GCA is associated with increased mortality, and if so, the effect of age at diagnosis and sex on the association.

Methods. We used the medical database of Clalit Health Services for this retrospective cohort study. Followup was from January 1, 2002, and continued until death or end of followup on September 1, 2018. Incident GCA patients were compared with age- and sex-matched controls. Estimated median survival times were calculated using the Kaplan-Meier method. HR for all-cause mortality were obtained by the Cox proportional hazard model, adjusted for sociodemographic variables and cardiovascular risk factors.

Results. The study included 7294 patients with GCA and 33,688 controls. The mean age at start of followup was 72.1 ± 9.9 years with 69.2% females. Estimated median survival time was 13.1 years (95% CI 12.6–13.5) in patients with GCA compared with 14.4 years (95% CI 14.1–14.6) in controls ($p < 0.001$). The multivariate analysis demonstrated increased mortality risk in the first 2 years after diagnosis (HR 1.14, 95% CI 1.04–1.25) and > 10 years after diagnosis (HR 1.14, 95% CI 1.02–1.3). The mortality risk was higher in patients diagnosed at ≤ 70 years of age [HR 1.5 (95% CI 1.14–1.99) 0–2 yrs; HR 1.38 (95% CI 1.1–1.7) > 10 yrs].

Conclusion. Patients with GCA have a minor decrease in longterm survival compared to age- and sex-matched controls. The seen difference is due to excess mortality in the first 2 years, and > 10 years after diagnosis. Patients diagnosed ≤ 70 years of age are at greater risk. (J Rheumatol First Release July 1 2020; doi:10.3899/jrheum.190927)

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Giant cell arteritis (GCA) is the most prevalent vasculitis over the age of 50, affecting large- and medium-size arteries[1]. The arteries most commonly involved are the aorta and its major branches, as well as the superficial temporal, ophthalmic, posterior ciliary, and the vertebral arteries[2]. GCA only rarely occurs before the age of 50 and reaches a peak incidence in the eighth decade of life[3]. The highest incidence rates have been reported from Scandinavian countries, ranging between 19.1 and 32.8 per 100,000 for populations older than 50 years[3]. In Spain, the Mediterranean region, Canada, and Israel, reported GCA incidence rates range between 6.9 and 11.3 per 100,000 individuals over the age of 50[3,4].

A common and dangerous complication of GCA is partial or complete loss of vision, occurring in 20% of patients, often early in the course of the disease[5,6]. Another major complication is large-vessel involvement, which may lead to aortic dissection or aneurysm. The leading cause of death

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