

Biopsy-proven giant cell arteritis patients with coronary artery disease have increased risk of aortic aneurysmal disease and arterial thrombosis

Sirs,

Due to the progressive aging of the European population, giant cell arteritis (GCA) has emerged as a relevant disease in our daily clinical practice (1). However, controversies on whether GCA is associated with increased mortality are still present. In this regard, Talarico *et al.* have recently assessed the mortality of GCA in a series of 112 biopsy-proven patients diagnosed between 1990 and 2010 in Pisa (2). In keeping with population-based studies from Northern and Southern Europe (3, 4), GCA in Pisa was not associated with increased rate of mortality.

There are, however, important unanswered aspects that may influence the mortality of GCA. In spite of being vertebrobasilar stroke more common in biopsy-proven GCA patients than in individuals of the same age and sex (5, 6), as elegantly pointed out by Pipitone *et al.*, mortality rates of GCA are generally comparable to those of the general population (7). Nevertheless, when we specifically assessed the incidence of ischaemic heart-coronary artery disease (IHD) in a series of 210 biopsy-proven GCA patients diagnosed in the Lugo region of Northwest Spain between 1981 and 2001, we observed that the standardised mortality ratio due to IHD using the Spanish population 50 years and older as a reference was slightly increased (1.62 [95% confidence interval- CI 0.70–3.20]) (8). Mortality in patients with GCA who had IHD was higher than that observed in patients without IHD [crude hazard ratio 3.42 (95% CI 1.85–6.33), $p < 0.001$; age and sex adjusted hazard ratio 2.81 (95% CI 1.51–5.21), $p = 0.001$] (8). In a subsequent study, we confirmed that aortic aneurysmal disease may be observed in the follow-up of Lugo individuals that had previously been diagnosed with biopsy-proven GCA (9).

Taking those results together, we have assessed whether the frequency of large-vessel involvement, defined as aortic aneurys-

mal disease and/or arterial thrombosis, was increased in biopsy-proven GCA patients who had suffered IHD. For this purpose we assessed data of 255 biopsy-proven GCA patients diagnosed between 1981 and 2005 in Northwest Spain that were followed until death or September 2006 (10). We did not observe increased risk of cancer in this series (10). However, a reappraisal of follow-up data of this cohort allowed disclosing increased risk of aortic aneurysmal disease or arterial thrombosis in those with had experienced IHD. With respect to this, IHD before or after the diagnosis of GCA occurred in 22 (8.6%) of the 255 biopsy-proven GCA patients. Interestingly, 7 (31.8%) of the 22 patients with IHD developed subsequently aortic aneurysmal disease or arterial thrombosis. In contrast, aortic aneurysmal disease or arterial thrombosis was only observed in 25 (10.7%) of 233 without IHD. Therefore, the risk of large-vessel involvement in biopsy-proven GCA patients with IHD from Northwest Spain was almost 4 times increased when compared with those without IHD (odds ratio 3.88 [95% CI: 1.49–10.21]; $p = 0.004$).

One of the main limitations of the epidemiological studies on GCA is the relatively small size of the series. Therefore, our results should be confirmed by other groups. Although we are also aware of the important influence of traditional cardiovascular risk factors in the risk of vascular complications of GCA (5, 9, 11), our findings indicate that biopsy-proven GCA patients with a history of coronary artery disease should be monitored for the existence of large-vessel involvement, in particular if hypertension is present at the time of diagnosis of GCA (5, 9, 11).

M.A. GONZALEZ-GAY¹, MD, PhD
C. GARCIA-PORRUA², MD, PhD
C. GONZALEZ-JUANATEY³, MD, PhD
J.A. MIRANDA-FILLOY², MD
R. BLANCO¹, MD, PhD
J. LLORCA⁴, MD, PhD

¹Division of Rheumatology, Hospital Universitario Marqués de Valdecilla, IFIMAV, Santander, Spain; ²Rheumatology Unit, Hospital Lucus Augusti, Lugo, Spain;

³Division of Cardiology, Hospital Lucus Augusti, Lugo, Spain, and ⁴Division of Epidemiology and Computational Biology,

School of Medicine, University of Cantabria, Santander, and CIBER Epidemiología y Salud Pública (CIBERESP), Spain.

Address correspondence to:

Miguel A. González-Gay,
Rheumatology Division, Hospital Universitario Marqués de Valdecilla, IFIMAV, Avenida de Valdecilla, s/n, 39008, Santander, Spain.
E-mail: miguelaggay@hotmail.com

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References

1. GONZALEZ-GAY MA, VAZQUEZ-RODRIGUEZ TR, LOPEZ-DIAZ MJ *et al.*: Epidemiology of giant cell arteritis and polymyalgia rheumatica. *Arthritis Rheum* 2009; 61: 1454–61.
2. TALARICO R, FIGUS M, D'ASCANIO A *et al.*: Mortality in giant cell arteritis: analysis of a monocentric cohort of biopsy-proven patients. *Clin Exp Rheumatol* 2012 Oct 18. [Epub ahead of print].
3. GRANT JT, MYKLEBUST G, WILSGAARD T, JACOBSEN BK: Survival in polymyalgia rheumatica and temporal arteritis: a study of 398 cases and matched population controls. *Rheumatology* 2001; 40: 1238–42.
4. GONZÁLEZ-GAY MA, BLANCO R, ABRAIRA V *et al.*: Giant cell arteritis in Lugo, Spain, is associated with low longterm mortality. *J Rheumatol* 1997; 24: 2171–6.
5. GONZALEZ-GAY MA, VAZQUEZ-RODRIGUEZ TR, GOMEZ-ACEBO I *et al.*: Strokes at time of disease diagnosis in a series of 287 patients with biopsy-proven giant cell arteritis. *Medicine* (Baltimore) 2009; 88: 227–35.
6. SALVARANI C, DELLA BELLA C, CIMINO L *et al.*: Risk factors for severe cranial ischaemic events in an Italian population-based cohort of patients with giant cell arteritis. *Rheumatology* (Oxford) 2009; 48: 250–3.
7. PIPITONE N, BOIARDI L, BAJOCCHI G, SALVARANI C: Long-term outcome of giant cell arteritis. *Clin Exp Rheumatol* 2006; 24 (Suppl. 41): S65–S70.
8. GONZALEZ-GAY MA, RUBIERA G, PIÑEIRO *et al.*: Ischemic heart disease in patients from Northwest Spain with biopsy proven giant cell arteritis. A population based study. *J Rheumatol* 2005; 32: 502–6.
9. GONZALEZ-GAY MA, GARCIA-PORRUA C, PIÑEIRO A, PEGO-REIGOSA R, LLORCA J, HUNDEGG: Aortic aneurysm and dissection in patients with biopsy-proven giant cell arteritis from northwestern Spain: a population-based study. *Medicine* (Baltimore) 2004; 83: 335–41.
10. GONZALEZ-GAY MA, LOPEZ-DIAZ MJ, MARTINEZ-LADO L *et al.*: Cancer in biopsy-proven giant cell arteritis. A population-based study. *Semin Arthritis Rheum* 2007; 37: 156–63.
11. GONZALEZ-GAY MA, PIÑEIRO A, GOMEZ-GIGIREY A *et al.*: Influence of traditional risk factors of atherosclerosis in the development of severe ischemic complications in giant cell arteritis. *Medicine* (Baltimore) 2004; 83: 342–7.