Dr. Czihal replies

To the Editor:

We appreciate the comments from Milchert, *et al*[1] on our study evaluating the involvement of femoropopliteal arteries in giant cell arteritis (GCA)[2]. In their letter, they describe 2 cases with different clinical manifestations of extracranial GCA, including 1 patient with suspected vasculitis of the lower extremities. They discuss the difficulties in discriminating between vasculitis and arteriosclerosis in clinical practice.

Detection of a homogenous, hypoechogenic, circumferential vessel wall thickening by color duplex sonography (CDS) has been shown to be specific for diagnosis of extracranial GCA[3]. However, we agree with Milchert and colleagues that the accuracy of this method in evaluating the carotid and lower extremity arteries may be hampered in patients exhibiting concomitant, calcified arteriosclerotic lesions[4,5,6]. It is of interest in this context that, as a result of the high prevalence of arteriosclerosis of lower extremity arteries in the elderly population with GCA, 18F fluorodeoxyglucose-positron emission tomography (FDG-PET) imaging has a low specificity for diagnosis of vasculitis of the lower extremity arteries[7]. It is our hypothesis that concomitant arteriosclerosis of the lower extremity arteries results in the sonographic "beaded tube" appearance of the innermost layer of the thickened vessel wall in vasculitis of the femoropopliteal arteries (Figure 1)[2,6].

By contrast, arteriosclerosis is very uncommon in the distal subclavian and axillary arteries, and vascular 18F-FDG uptake as well as the hypoechogenic, circumferential wall thickening of these arteries depicted by CDS can be considered to be virtually pathognomonic for GCA in patients aged ≥ 50 years[4,7]. Of note, vasculitis of the subclavian and/or axillary arteries was detected in 74.2% of our patients with involvement of the femoropopliteal arteries and in all except 1 patient with carotid artery involvement by CDS criteria[2,4]. Therefore, a sonographic finding consistent with vasculitis of the proximal arm arteries strongly supports a suspected diagnosis of GCA of the lower extremity or carotid arteries. We and others suggest routine examination of the proximal arm arteries in all patients with suspected GCA[8]. Improvement of ischemic symptoms after initiation of corticosteroid treatment, as reported for GCA of the proximal arm arteries, may further substantiate the vasculitic expression in patients presenting with peripheral arterial disease[9].

Figure 1. A female patient age 70 years with bilateral critical leg ischemia secondary to giant cell arteritis with histological proof after bypass surgery. Color duplex sonography of the superficial femoral artery depicts long-segment, circumferential, hypoechogenic wall thickening with a "beaded tube" appearance of the innermost layer (arrows).

MICHAEL CZIHAL, MD, Division of Vascular Medicine, University Hospital – Campus City Center, Pettenkoferstrasse 8a, Munich 80336, Germany. E-mail: michael.czihal@med.uni-muenchen.de

REFERENCES

1. Milchert M, Fischer K, Flicinski J, Przepiera-Bedzak H, Brzosko M. Arteriosclerosis or vasculitis? Color duplex sonography in giant cell arteritis [letter]. J Rheumatol 2012;39:1898-9.
2. Czihal M, Tatò F, Rademacher A, Kuhlencordt P, Schulze-Koops H, Hoffmann U. Involvement of the femoropopliteal arteries in giant cell arteritis: Clinical and color duplex sonography. J Rheumatol 2012;39:314-21.
3. Aschwanden M, Kesten F, Stern M, Thalhammer C, Walker UA, Tyndall A, et al. Vascular involvement in patients with giant cell arteritis determined by duplex sonography of 2 x 11 arterial regions. Ann Rheum Dis 2010;69:1356-9.
4. Czihal M, Zanker S, Rademacher A, Tatò F, Kuhlencordt P, Schulze-Koops H, et al. Sonographic and clinical pattern of extracranial and cranial giant cell arteritis. Scand J Rheumatol 2012;41:231-6.
5. Tato F, Hoffmann U. Clinical presentation and vascular imaging in giant cell arteritis of the femoropopliteal and tibioperoneal arteries. Analysis of four cases. J Vasc Surg 2006;44:176-82.
6. Tato F, Hoffmann U. Giant cell arteritis: A systemic vascular disease. Vasc Med 2008;13:127-40.
7. Förster S, Tato F, Weiss M, Czihal M, Rominger A, Bartenstein P, et al. Patterns of extracranial involvement in newly diagnosed giant cell arteritis assessed by physical examination, colour coded duplex sonography and FDG-PET. Vasa 2011;40:219-27.
8. Schmidt WA, Seifert A, Gromnica-Ihle E, Krause A, Natusch A. Ultrasound of proximal upper extremity arteries to increase the diagnostic yield in large-vessel giant cell arteritis. Rheumatology 2008;47:96-101.
9. Schmidt WA, Moll A, Seifert A, Schicke B, Gromnica-Ihle E, Krause A. Prognosis of large-vessel giant cell arteritis. Rheumatology 2008;47:1406-8.

J Rheumatol 2012;39:9; doi:10.3899/jrheum.120442