Response to: 'Correspondence to 'Slope sign': a feature of large vessel vasculitis?' by Milchert *et al*

We are grateful for the interest in our article and agree with Milchert *et al*¹ that the slope sign deserves a precise definition. Intimal medial thickness (IMT) of the axillary artery is the current way of assessing large vessel giant cell arteritis (LV-GCA) by ultrasound (US), with a cut-off value of greater than 1.0 mm suggesting LV-GCA.² Other causes of arterial wall thickening can mimic vasculitis such as atherosclerosis and it is often challenging to differentiate between atherosclerosis and vasculitis related thickening of the axillary artery.³ 'Slope sign' is a visual definition of a smooth, homogenous, gradual transition from an abnormal axillary arterial segment with increased IMT to an arterial segment with normal IMT. This should help differentiate between vasculitic and atherosclerotic wall thickening.⁴ We suggest that sonographers should seek to demonstrate the slope sign in all cases of suspected LV-GCA through the use of panoramic views, if necessary, of the axillary artery from the humeral neck to the origin of the circumflex branch.

We agree with Milchert *et al*¹ that, in LV-GCA the slope is usually long. However, we disagree that atherosclerosis can demonstrate a sharp or short slope. Our observations are that abrupt, atherosclerotic thickening involves a focal area of arterial wall and therefore cannot be mistaken for a slope. We also have observed that the echotexture of the vasculitic IMT is hypoechoic which transitions smoothly to a normal echotexture. The retrospective analysis by Milchert *et al*⁵ validates our finding. However, we do not think the axillary-brachial IMT ratio is a surrogate for the slope sign since it does not assess the gradual transition which is a critical part of the definition.

We agree that this sign requires validation and assessment as a marker of disease extent in prospective studies. Our ongoing multicentre HAS GCA study (National Institute for Health Research number 264294), exploring quantitative US halo score as a prognostic and monitoring tool in GCA, has the assessment of slope sign as one of its objectives.

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Handling editor Josef S Smolen

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Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

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To cite Sebastian A, Kayani A, Dasgupta B. *Ann Rheum Dis* Epub ahead of print: [please include Day Month Year]. doi:10.1136/annrheumdis-2019-216690

Received 2 December 2019

Accepted 2 December 2019

► <http://dx.doi.org/10.1136/annrheumdis-2019-216601>

Ann Rheum Dis 2019;**0**:1. doi:10.1136/annrheumdis-2019-216690

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