



Response to ‘Comment on: ‘A new era for giant cell arteritis’’

S. P. Mollan¹ · V. Quick² · A. J. Sinclair³ · R. Luqmani⁴

Received: 6 November 2019 / Accepted: 6 November 2019 / Published online: 25 November 2019
© The Royal College of Ophthalmologists 2019

To the Editor:

We welcome Dr Ing’s critique [1] of our review paper [2], which articulated the advances in Giant Cell Arteritis (GCA). His letter highlights the importance of reviews in a disease area where high-quality evidence is challenging as well as changing historical practice.

We unequivocally support the need for a confirmatory test for GCA, given the seriousness of the disease and the significant adverse events from the cumulative glucocorticoid burden as recommended by evidence [3, 4] and through rigorous systematic literature review by guideline groups [5]. Ultrasound has many clear advantages over temporal artery biopsy (TAB). It is more sensitive than TAB in most studies, safe, non-invasive, repeatable, and allows many different arterial territories to be examined at one time [3, 4]. A recent meta-analysis of ultrasound use in GCA found a pooled sensitivity of 77% and specificity of 96% [4, 5]. Fast track pathways that utilise ultrasound have shown reduced rates of visual loss compared with their previous TAB-driven pathways [4]. However, we strongly agree that TAB still has a place where ultrasound does not rule in or rule out GCA, or is unavailable.

There are many mimics of GCA, as detailed by Dr Ing [1]. However, in our collective experience, the diagnosis would not rest solely on the histopathology in isolation,

without due consideration of a thorough history and examination. What constitutes a positive TAB is not black and white, for example atherosclerotic changes can be misinterpreted as healing GCA. A key point from TABUL was the inter-observer agreement for evaluation of biopsy vs ultrasound. Both tests provided only moderate levels of agreement when 12 sonographers (kappa 0.61) assessed 30 ultrasound videos and 14 pathologists (kappa 0.62) assessed 30 high-quality biopsy images [3].

It can be easy to be critical of study results, and indeed in TABUL when 381 biopsies were performed 28 (7.3%) did not return arterial tissue. Sadly, this reflects routine care within normal NHS practice. It is equally important to recognise the potential bias deriving from idealised practice within a single individual centre, with a dedicated surgeon obtaining TAB effectively, thereby considerably improving the sensitivity of the test. Whilst not wishing to undermine such practice, we should avoid using such audit data to popularise the incorrect assumption that such practice can be replicated readily, without a large change in how the service is provided.

As to the controversy of a ‘gold standard’ for diagnosis in GCA, the use of this term originated from the widespread acceptance of gold as currency. Over time, various commodities have been used as money but typically, the ones that lose the least value over time have become the accepted form. TAB used to be the only confirmatory test available. Many clinicians in the United Kingdom now find it hard to access this ‘commodity’. By contrast, ultrasound, combined with careful physician judgement, has been proven to be superior to TAB both in diagnosis and in terms of cost effectiveness (ultrasound is almost ten times less expensive than TAB) [3]. Despite the fact that (TAB) gold is now a rare currency, it remains accessible when the (clinician) need requires it.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflicts of interest.

✉ S. P. Mollan
soozmollan@doctors.org.uk

¹ Birmingham Neuro-Ophthalmology, Queen Elizabeth Hospital, University Hospitals Birmingham, Birmingham B15 2WB, UK

² Luton and Dunstable University Hospital, Lewsey Road, Luton LU4 0DZ, UK

³ Metabolic Neurology, Institute of Metabolism and Systems Research, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK

⁴ The Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Kennedy Institute of Rheumatology, Roosevelt Drive, Headington, Oxford OX3 7FY, UK

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

1. Ing E. Comment on 'A new era for giant cell arteritis'. *Eye*. 2019. <https://doi.org/10.1038/s41433-019-0701-y>.
2. Lyons HS, Quick V, Sinclair AJ, Nagaraju S, Mollan SP. A new era for giant cell arteritis. *Eye*. 2019. <https://doi.org/10.1038/s41433-019-0608-7>.
3. Luqmani R, Lee E, Singh S, Gillett M, Schmidt WA, Bradburn M, et al. The role of ultrasound compared to biopsy of temporal arteries in the diagnosis and treatment of giant cell arteritis (TABUL): a diagnostic accuracy and cost-effectiveness study. *Health Technol Assess*. 2016;20:1–238.
4. Schmidt WA. Ultrasound in the diagnosis and management of giant cell arteritis. *Rheumatology*. 2018;57:ii22–ii31.
5. Hellmich B, Agueda A, Monti S, Buttgereit F, de Boysson H, Brouwer E, et al. 2018 Update of the EULAR recommendations for the management of large vessel vasculitis. *Ann Rheum Dis*. 2019. pii: annrheumdis-2019p-215672. <https://doi.org/10.1136/annrheumdis-2019-215672>.