How do temporal artery biopsy results affect management of patients with suspected giant cell arteritis?

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Background and purpose

- Temporal artery biopsy (TAB) is the gold standard for diagnosis of giant cell arteritis (GCA) with typical histopathological findings (Figure 1). Although it has a specificity of 100%, its sensitivity is only 39% and it is an invasive procedure with possible serious complications including nerve injury.[1]
- The purpose of this study was to analyse to what degree TAB results impacted the clinical management of patients with suspected GCA.

Methods

- We reviewed TABs between 2016 and 2021 carried out at Frimley Park Hospital. In total 406 TABs were carried out, of these 18% (72) were positive, 79% (320) were negative and 3% (14) were inconclusive (Figure 2).
- 172 were ultimately treated as GCA but of these only 42% had a positive TAB, the others having been given a clinical diagnosis of GCA due to a strong suspicion of diagnosis despite negative/inconclusive TAB (Figure 3).

Results

These results show that the majority of our patients treated as GCA had a negative TAB which should stimulate discussion whether TAB should still be considered first-line in patients where there is a strong clinical suspicion (typical symptoms and signs, raised inflammatory markers, etc), particularly when less-invasive diagnostic techniques such as vascular ultrasound are becoming more commonplace (Figure 4).

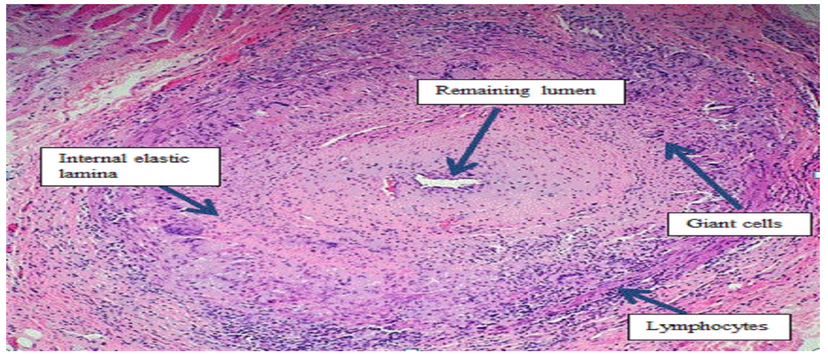


Figure 1: Typical histopathological findings for TAB specimens for patients with GCA[2]

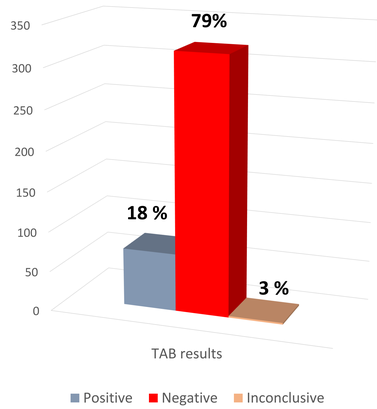


Figure 2: TAB results

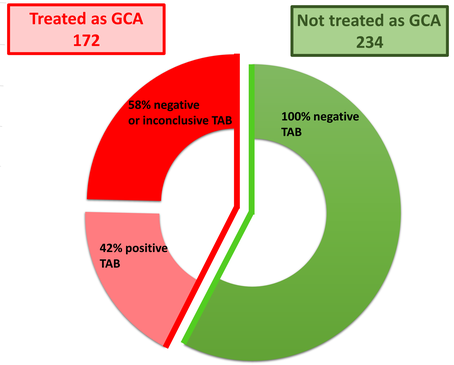


Figure 3: Final management for patients with suspected GCA post TAB

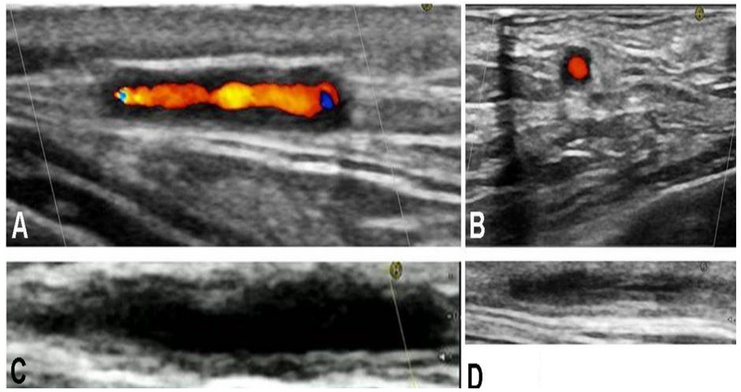


Figure 4: Temporal artery ultrasound findings in patients with GCA: (A) longitudinal view with 'halo' sign; (B) transverse view with 'halo' sign; (C) longitudinal view before compression; (D) longitudinal view with compression ('compression' sign positive)[3]

References

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2. Lunagariya A, Ruparelia C, Bollu P C, et al. (May 22, 2018) Temporal Arteritis Presenting as an Isolated Bilateral Abducens Nerve Palsy: A Rare Case of a 65-year-old Male. Cureus 10(5): e2667. DOI 10.7759/cureus.2667
3. Chrysidis S, Duftner C, Dejaco C, et al. Definitions and reliability assessment of elementary ultrasound lesions in giant cell arteritis: a study from the OMERACT Large Vessel Vasculitis Ultrasound Working Group. RMD Open 2018;4:e000598. doi:10.1136/ rmdopen-2017-000598