

Evaluating Clinical Outcomes in Temporal Artery Biopsy A Retrospective Observational Study

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Background

Giant cell arteritis (GCA) is an inflammatory vasculopathy affecting large and medium calibre arteries, with temporal artery biopsy (TAB) constituting an important diagnostic component. The aim of this study was to analyse local practice in TAB and assess clinical outcomes with reference to current guidelines.

Methods

All patients undergoing TAB in our institution between April 2018 and March 2021 were retrospectively studied and the American College of Rheumatology (ACR) score recorded.

Results

124 patients were included in the study. The female to male ratio was 2.2:1 and average age was 71±10 years. 95 patients presented with temporal artery signs and headache. The median time from steroid commencement to TAB was 6 days (range 0-36 days). 23 biopsies were positive (median ACR score of 4, range 2-4, excluding pathology result), these patients were treated with steroids. 98 biopsies were negative or non-specific; most stopped steroid treatment, however 30 patients were clinically GCA and continued therapy (median ACR score of 3, range 2-4). Three patients were never prescribed steroids (median ACR score of 2).

Table 1: ACR scoring without pathology and their relationship to the histological outcomes and the clinical decision of management patients with steroids

ACR Scoring without a pathology/ No. of Patients	ACR Score 4	ACR Score 3	ACR Score 2	ACR Score 1	Median ACR Score	Mean ESR	Mean CRP
Never started on steroids	0	1	2	0	2	48	49
Steroids reduced after a Negative Pathology	8	26	14	1	3	50	43
Continued steroids as clinical GCA although Negative Pathology	10	19	1	0	3	71	87
Positive Pathology	12	10	1	0	4	58	45

Table 2

The American College of Rheumatology (ACR) classification criteria for GCA.

- (i) Age at disease onset >50 years: development of symptoms or findings beginning at the age of >50 years.
- (ii) New headache: new onset of or new type of localized pain in the head.
- (iii) Temporal artery abnormality: temporal artery tenderness to palpation or decreased pulsation, unrelated to arteriosclerosis of cervical arteries.
- (iv) Elevated ESR: ESR≥5 mm/hour by the Westergren method.
- (v) Abnormal artery biopsy: biopsy specimen with artery showing vasculitis characterized by a predominance of mononuclear cell infiltration or granulomatous inflammation, usually with multinucleated giant cells.

Conclusion

GCA is a clinical diagnosis guided by symptoms and signs, inflammatory biochemical markers, and medium artery biopsy. The provisional ACR scoring is highly suggestive of the outcome of TAB.