Background: Giant cell arteritis (GCA) is an emergency. The initial treatment with high dose glucocorticoids (GC) often started on clinical suspicion without waiting for Temporal Arteritis biopsy (TAB) results, which can take days to be available. TAUS is a simple, non-invasive test which is readily available. However, like any other ultrasound, it is also operator dependent. A positive halo sign is the most specific abnormality seen on TAUS in GCA patients. The percentage of false positive TAUS in GCA diagnosis is low (1), but it can result in over diagnosis and unnecessary exposure to high dose GC in elderly population.

Objectives: We looked at the reliability of TAUS in ruling out GCA after it was introduced within our rheumatology department one year ago.

Methods: We adopted the quality improvement methodology for assessment. Retrospective data of suspected GCA patients was collected over the last two years. TAUS was introduced regularly to the investigative plan after eleven months. Two Rheumatology consultants were trained in TAUS. Results were compared before and after the introduction of ultrasound as a diagnostic tool.

Results: From January 2018 to November 2019, 101 patients were referred to rheumatology with suspected GCA. Median age of our cohort was 72 years with male to female ratio of 1:3. 35 patients were referred in the first 11 months out of which, 10 (28.6%) were diagnosed with GCA. TAUS and TAB was done in 20% and 49% of patients respectively, 66 patients were referred in the next 12 months after TAUS was introduced. Out of 66, 14 patients (21.2%) were diagnosed as GCA. TAUS and TAB were done in 82% and 38% of the patients respectively. As listed in table 1, only 1 patient was found to have positive TAB after a negative TAUS (false negative). All of patients with positive TAUS were treated as GCA on the basis of clinical grounds, irrespective of TAB results. Despite the regular use of TAUS as a diagnostic tool in the second phase, there is a higher percentage of patients (78.8%) in which GCA was ruled out.

TAUS introduction

Before regular TAUS

| (Jan 2018 – Nov 2018) | After regular TAUS
| (Dec 2018 – Nov 2019) |

- Patients referred: 35
- GCA: 10 (28.6%) (14 (21.2%)
- Not GCA: 25 (71.4%) (52 (78.8%)
- TAUS done: 20% (82%)
- TAB done: 49% (38%)
- TAUS -ve and TAB +ve: 0 (1)
- TAUS +ve and TAB -ve/not done: 2 (8)

Conclusion: After the routine introduction of TAUS, the percentage of patients diagnosed with GCA has declined and clinicians have been able to exclude suspected GCA diagnosis in a larger proportion of patients referred. This is noteworthy as our Rheumatologists are still in the learning phases of determining the significance of utility of TAUS. There is only a small decline in TAB frequency, which is expected to go down further in the coming years. We also noticed that the number of patients referred has almost doubled. This might be due to better education and awareness at the primary and secondary care level which was done as part of the project.

Disclosure of Interests: None declared

References:

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