AAU in the Emergency Eye Clinic: Can we Optimize the Investigative Pathway for Patients Presenting in ARC?

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Background

Anterior uveitis presents with an annual incidence of 12/100,000 population, and is characterised by inflammation of the uveal tract including both iritis and iridocyclitis (1). Non-infectious uveitis conditions more commonly present in the developed world (2) with idiopathic anterior uveitis accounting for 50% of anterior uveitis causes(3). AAU is the most frequent extra-articular manifestation in spondyloarthropathies (SpA), with up to 40% of patients being shown to have an underlying undiagnosed spondylarthritis (4). Delayed diagnosis of patients with underlying SpA has been proven to reduce quality of life, and recurrent attacks of AAU can decrease this even further (5). There is no universally agreed investigative protocol for patients presenting with AAU. An investigative protocol was created and implemented by the Uveitis lead in the emergency eye clinic at Royal Bolton NHS Trust. Local guidelines were developed following review of guidelines from BMEC, Bristol Eye Hospital, and AAO Focal Points about Uveitis Investigations (6).

Aims

To evaluate the use of an AAU investigative protocol in ARC.
1. Are we appropriately investigating patients presenting with AAU to ARC?
2. Can we improve efficacy and health outcomes in patients using an investigative protocol for patients presenting with AAU?

Methodology

Data collected from audit department for patients aged 18+ years presenting with AAU to ARC between **May and June 2022.**

→ Were both eyes dilated?

→ Is this a first unilateral, first bilateral or recurrent attack?

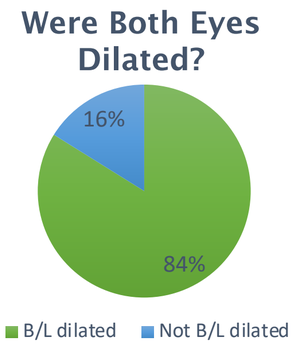
→ Known systemic disease associated with AAU?

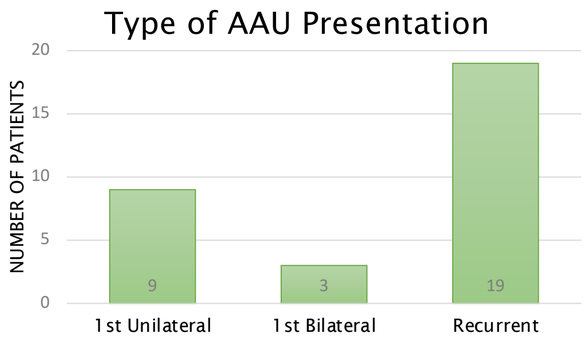
→ Were baseline tests requested? Did they receive:
Full metabolic panel, CXR, Syphilis serology
& Inflammatory causes and markers

→ Specialist Tests: HLAB27 and/or QuantiFERON?
Did they meet criteria?

Results

- 31 patients
- F 58%: M 42%
- 61% Caucasian
  7% Afro-Caribbean
  16% Asian
  16% Unknown
- Mean age 48.23 years





Summary of Patients Receiving Baseline Tests in ARC

Summary	First Unilateral attack	First Bilateral attack	Recurrent attack	Total
Patients who should be investigated but were not	0	1	4	**5**
Patients who were unnecessarily investigated	1	0	1	**2**

Specialist Tests Requested in ARC

HLAB27

HLAB27 requested for 5 patients in ARC:
→ 3 patients tested HLAB27+

Indication for requesting HLA-B27 (7)	No. of Patients
Back Pain (Onset <45yrs and >3 months duration	0
Joint pain (requiring GP visit)	2
Not specified	3

QuantiFERON

QuantiFERON test requested if a patient has a **history of contact with a TB patient**.
From our cohort:
→ 1 QuantiFERON test requested inappropriately

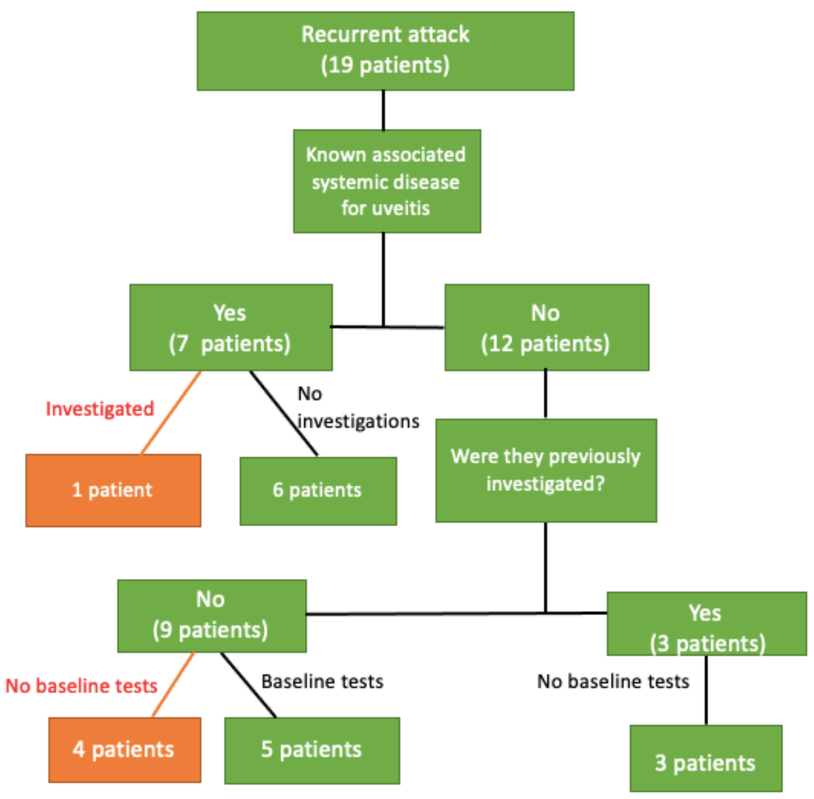
Follow-up
5 patients were not investigated for AAU according to local guidelines in ARC. Of these patients:
→ 2 had a flare of AAU in <12 months
→ 1 was found to to be HLAB27+ on subsequent review.

1st Unilateral Attack
Local guidelines state that there is **no need to investigate patients presenting with a first unilateral attack of uveitis** unless they have a severe attack with fibrinous uveitis or hypopyon.
Total of 9 patients:
→ 1 patient had a severe attack and baseline tests requested
→ 1 patient investigated unnecessarily against protocol
→ 7 remaining patients not investigated in line with local to guidance

First Bilateral Attack
If there is **no history of known systemic disease associated with AAU** – ensure baseline tests requested.
Total of 3 patients:
→ None had a known systemic disease associated with uveitis
→ Baselines tests were correctly requested for 2 of those patients
→ 1 patient was not investigated against protocol

Recurrent Attack
Flowchart indicates investigative protocol for patients presenting with recurrent attack.

Those highlighted in orange followed the **incorrect investigative pathway.**



To Summarise:
→ 77.4% of patients correctly followed the investigative protocol.
→ 6.5% of patients were unnecessarily investigated further.
→ 16.1% of patients did not have further investigations requested despite guidelines stating they would benefit from further tests.

Outcomes

This audit aimed to evaluate how investigations for AAU are being requested in ARC. Our audit established:

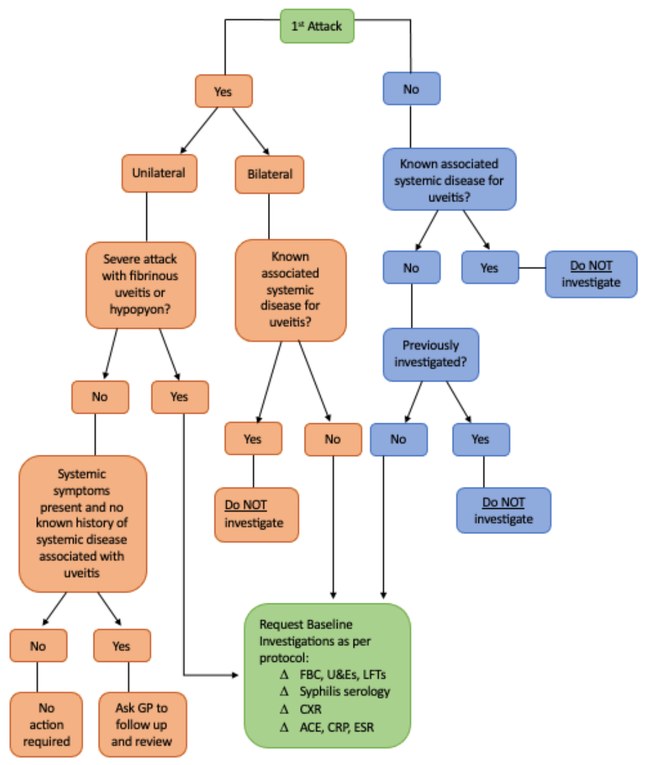
→ 77% of patients are being **appropriately investigated** for AAU in ARC.
→ More patients are not being investigated when they would benefit from tests, as opposed to being over-investigated.
→ 19% of patients had specialist investigations requested in ARC – two-thirds did not have a clear indication documented.

Conclusion

Focus needs to be made on patients who are not being investigated appropriately in ARC. This could lead to delayed diagnosis of underlying associated conditions and further delay referral for specialist review and subsequent management of these diseases.

Recommendations:

→ An investigative protocol has been placed in clinic rooms to facilitate clinicians when assessing patients presenting with AAU.
→ Indications for specialist tests must be clearly documented in patient notes.



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