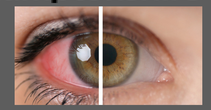
Assessing the effectiveness of an MSK Rheumatology back pain questionnaire in early referral and diagnosis of ankylosing spondylitis in uveitis patients

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INTRODUCTION

Spondylo-arthritis represents a chronic inflammatory condition primarily targeting the joints of the spine. Uveitis stands as the most common initial extra - articular manifestation of axial spondylo-arthritis (SpA), occurring in up to one-third of the patients. There is a diagnostic delay in Axial SpA, with studies showing that the time between symptom onset and diagnosis is 5 - 7 years. The delay of diagnosis can be attributed to the non-specific presentation of chronic back pain as well as late ophthalmology referrals to rheumatology. Prolonged delay of diagnosis can be associated with adverse outcomes including functional impairment and diminished quality of life.

BACKGROUND

A previous audit in our department showed that 25% of uveitis patients were clinically indicated to have been referred to rheumatology were not. This presented an opportunity for improvement at the NGH ophthalmology department. As a result, one of our objectives was to implement the use of the "MSK Rheumatology Inflammatory Back Pain Questionnaire" as a referral tool, to find out whether the relevant history and questions were asked to all uveitis patients, to mitigate diagnostic delays and enable early management of Axial SpA.

OBJECTIVES

- To evaluate how many uveitis patients at Northampton General Hospital (NGH) Eye department are appropriately referred to rheumatology for ankylosing spondylitis.
- To assess the effectiveness of the MSK Rheumatology Inflammatory back pain questionnaire in referring uveitis patients to rheumatology for the diagnosis of ankylosing spondylitis.

METHODS

- The patients presenting to the uveitis clinic at NGH were reviewed prospectively from May 2023-July 2023 (3 months).
- Medi-viewer / Symphony systems were used to see patient details, whether the patients were already under rheumatology, any previous episodes and family history.
- The MSK Rheumatology Inflammatory Back Pain questionnaire was completed by all the patients. It includes 12 questions, a score of 4 or higher signifies a need for referral. (Fig 4)
- Our expectation was that by incorporating an established back pain questionnaire should encourage thorough back history (which is sometimes omitted in the ophthalmology department and as back pain tends to be non-specific)

RESULTS

Out of the 40 patients, 16 were males and 24 were females, resulting in a male-to-female (M:F) ratio of 2:3. (Fig 1)
The age of the patients ranged from 22 to 78 years, with a mean age of 52 years. (Fig 2)
5 patients presented as their first episode compared to 27 who had previous episodes of uveitis as well.
16 patients were HLAB27 positive whereas 7 were HLAB27 negative

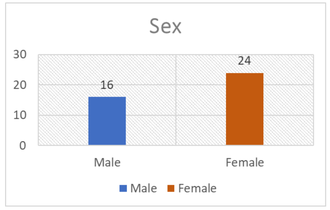


Fig 1: Male and female ratio

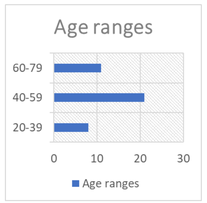


Fig 2: Age ranges

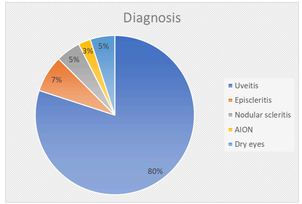


Fig 3: Diagnosis of patients presenting to uveitis clinic

MSK Rheumatology Back Pain Questionnaire
Q1: History of waking up with pain during the second half of the night
Q2: Did the patient's back pain start at an age younger than 45 years
Q3: Did the back pain develop gradually?
Q4: Do the symptoms improve with movement?
Q5: Are the symptoms exacerbated with rest?
Q6: History of alternating buttock pain?
Q7: History of early morning stiffness for >30 mins?
Q8: Pain is relieved with NSAIDS within 24-48 hours
Q9: History of peripheral arthritis/enteritis
Q10: History of psoriasis, inflammatory eye or bowel disease, reactive arthritis?
Q11: Family history of any of above conditions or Ankylosing Spondylitis?
Q12: Other relevant history/examination

Fig 4: MSK Rheumatology Inflammatory back pain questionnaire

27 out of 40 had a pain score more than 4, 13 scored less than 4. (Fig 5). 9 out of 40 were already under Rheumatology care, 8 were referred to rheumatology, 23 were not referred of which 13/23 scored less than 4 in the pain score. The remaining 10 were not referred due to awaiting blood results, further follow up or lack of systemic features resulting in discharge.

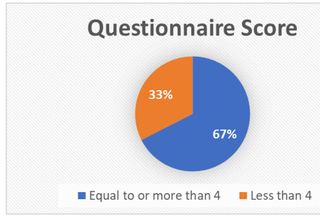


FIG 5: Questionnaire Scores of all patients that presented to uveitis clinic

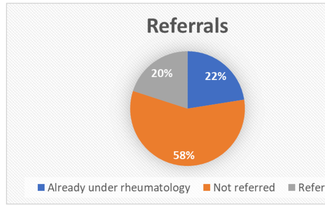


FIG 6: Pie chart showing patient referral outcomes

EVIDENCE OF IMPROVEMENT

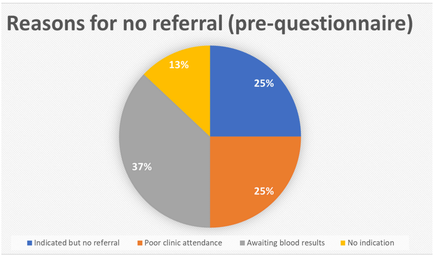


FIG 7: Reasons for why referrals were not done to rheumatology - 1st loop audit cycle.

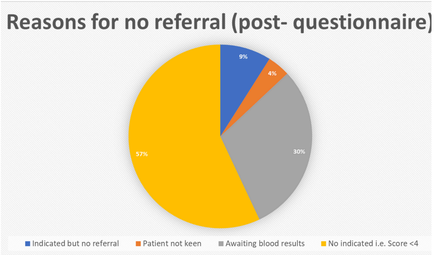


FIG 8: Reasons for why referrals were not done to rheumatology - after implementation of questionnaire

The results from the first audit loop showed that out of all the patients that had not been referred - 25% of patients had a clinical indication. Our second loop audit results show that implementation of the MSK Rheumatology Back Pain Questionnaire resulted in a substantial decrease in the number of missed/delayed referrals - (from 25% to 9%).

In the first audit loop, out of all the patients who had not been referred, only 13% of patients were not clinically indicated. In the second loop, this increased to 57% of patients i.e. most common reason for patients for not receiving referral changed from awaiting blood results to no clinical indication which shows an improvement in guidelines.

DISCUSSION

While uveitis may occur as an initial extra-articular manifestation of spondyloarthropathies, the two conditions involve distinct anatomical sites and clinical presentations. Our study underscores the significance of incorporating a MSK back pain questionnaire into the referral process for uveitis patients to rheumatology, particularly for diagnosing spondylo-arthritis. Our findings reveal that integrating an official MSK back pain questionnaire not only enhances the efficiency of history-taking in rheumatology within the ophthalmology department but also ensures more accurate referrals. This streamlined approach reduces the likelihood of missed or delayed referrals, thereby facilitating earlier diagnosis and management of conditions such as ankylosing spondylitis. By improving the diagnostic pathway, healthcare providers can promptly initiate appropriate interventions, ultimately leading to better patient outcomes and improved quality of life.

CONCLUSION

A considerable 40% of uveitis patients have undiagnosed spondylarthritis due to inadequate referrals. A comprehensive questionnaire can serve as effective tools for directing patients toward proper evaluation for inflammatory diseases.
This underscores the importance of a close partnership between both the specialties.
On further reflection, we would ideally have a larger sample size/record patients over a long duration of time. In addition, we would conduct follow-ups with patients post- referral to monitor the number for diagnosis' made.

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