

Adherence to screening recommendations for uveitis in juvenile idiopathic arthritis (JIA) patients. Is current practice adequate? Sultan Qaboos University Hospital Experience

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Outline

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DISCLOSURE

- I have no potential conflict of interest to report



Introduction

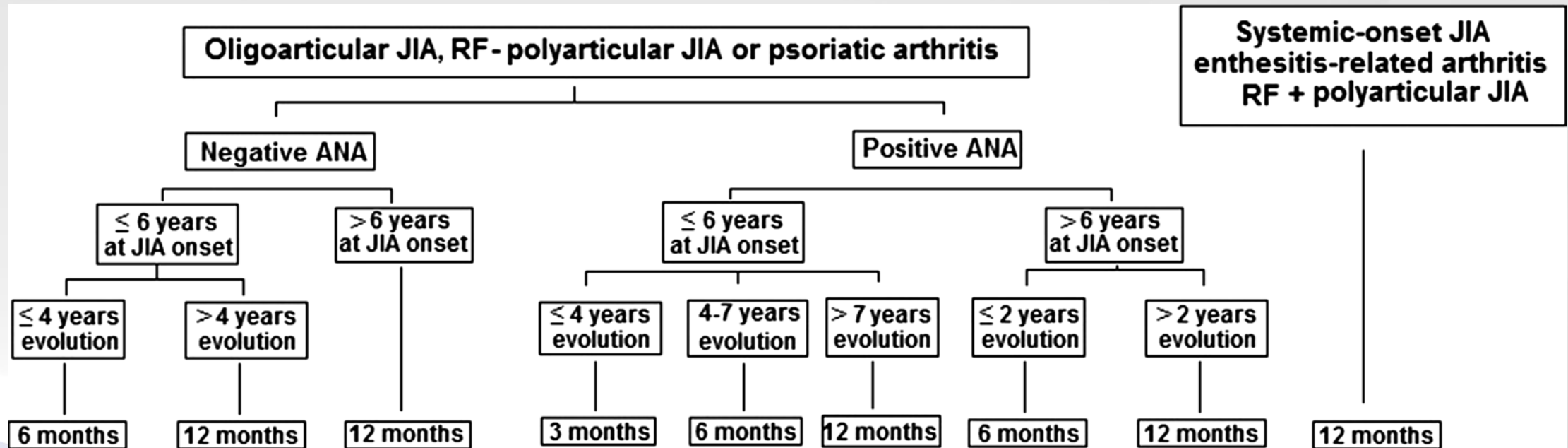
- Juvenile idiopathic arthritis (JIA) is the most common chronic rheumatic disease among children below 16 years of age.
- JIA-associated chronic anterior uveitis (CAU) is the most frequent extra-articular manifestation and develops in 10–20% of children with JIA.
- CAU in JIA is usually asymptomatic, has no external evidence of inflammation, and can cause visually disabling complications if it remains undetected and untreated.
- Therefore, screening for JIA-associated uveitis in at-risk patients is essential. The aim is to minimize intraocular inflammation and avoid complications leading to visual loss.
- International screening guidelines recommend ophthalmic assessments at specific intervals.

Angeles-Han S, et al. *Arthritis & Rheumatology*. 2019;71(6):864-877.

Sen ES et al. *Clin Immunol* 2020;211:108322.

International JIA Screening Guidelines

The first ophthalmological assessment should occur within 6 weeks of JIA diagnosis.



Bou R et al. Rheumatology International. 2015;35(5):777-785.

Purpose

- To study adherence to ophthalmic screening recommendations for uveitis in patients with juvenile idiopathic arthritis patients at Sultan Qaboos University Hospital (SQUH), Oman.
- To analyze factors influencing adherence to ophthalmic screening guidelines in these patients.



Method

- Design: Retrospective observational study.
- Sample: All patients diagnosed with JIA and attending the pediatric rheumatology service at SQUH from 2015 to 2020.
- **Exclusion criteria**
 1. Patients with arthritis due to causes other than JIA.
 2. Patients with uveitis or any ocular condition needing ongoing ophthalmic follow-up.



Method

- Demographic and clinical data collected from the SQUH Health Information System (HIS) – Trackcare[®].
 - Age, gender, region.
 - Duration of disease, JIA type, disease markers (ANA, RF, HLA B27 - +/-), medications.
 - Diagnosis of uveitis and age at diagnosis of uveitis.
- Details regarding rheumatology referral and ophthalmology screening appointments.

Method

Adherence: The patient's appointments were compared with the theoretical appointment. According to the screening guideline, the patient was classified as Adherent, Partially Adherent and Non-adherent.

Recommended screening appointment every 3 months (4 visits/year):

- Adherent: 4/year
- Partially adherent: ≥ 2 /year
- Non-adherent: < 2 /year

Recommended screening appointment every 6 months (2 visits/year):

- Adherent: 2/year
- Partially adherent: ≥ 1 /year
- Non-adherent: 0/year

Recommended screening appointment every year (1 visit/year):

- Adherent: 1/year
- Non-adherent: 0/year,,

Method

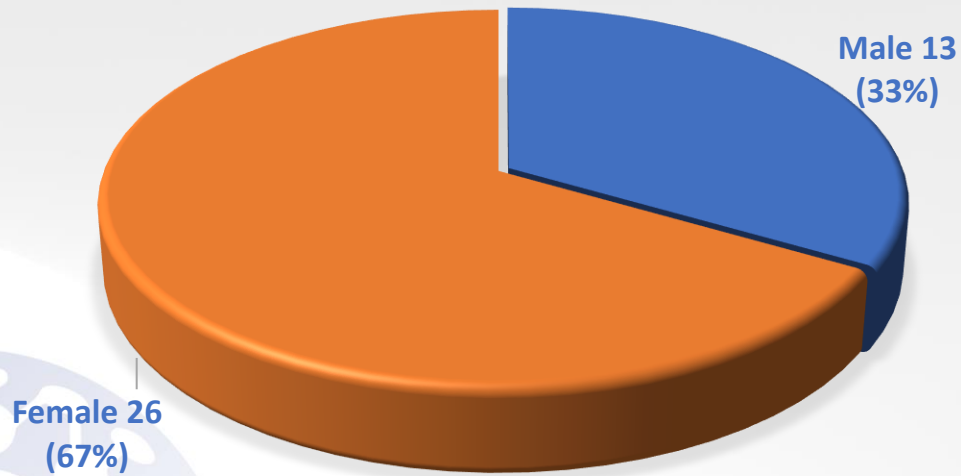
- Institution approval was obtained from the Medical and Research Ethics Committee (MREC) at the College of Medicine and Health Sciences (COMHS), Sultan Qaboos University, Oman
- Statistical methods:
 - IBM SPSS Statistics 29.0 (IBM Corp. Released 2022. Version 29.0. Armonk, NY: IBM Corp).
 - Categorical information frequency and percentages.
 - Continuous information : mean with standard deviation or median with quartiles based on the data distribution.
 - Associations: Chi-square test and independent T-test. P-value of <0.05 – statistically significant.



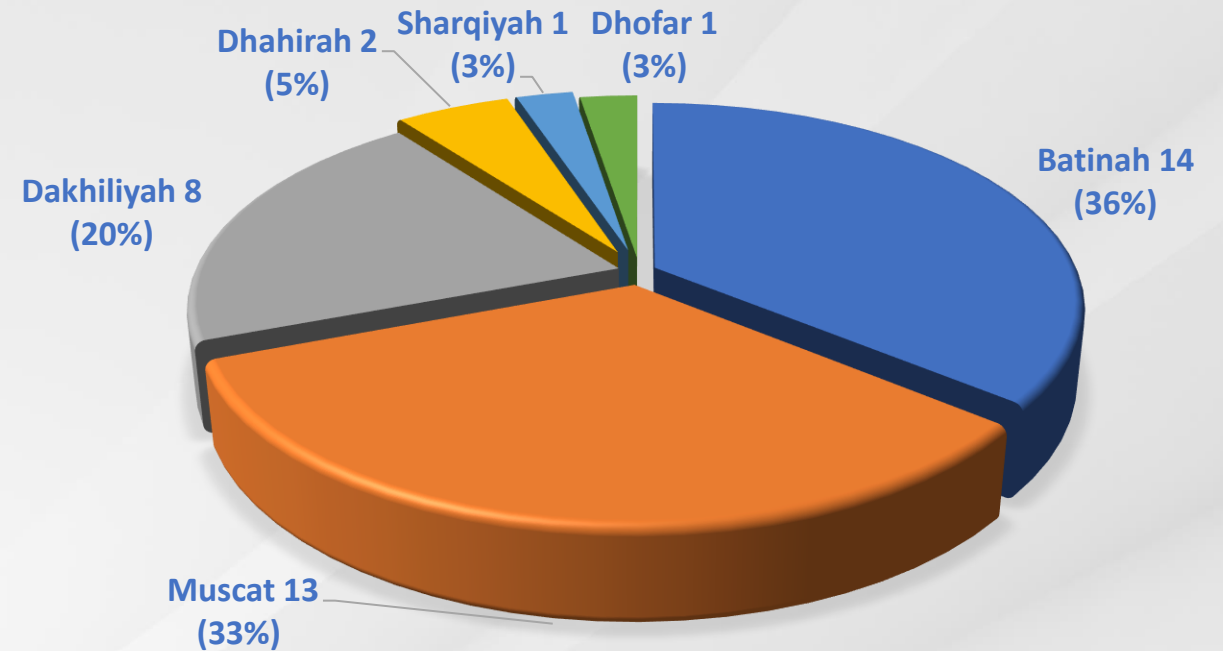
Results

Total number of patients	39
Age at diagnosis – Median (IQ)	3 (2, 7)

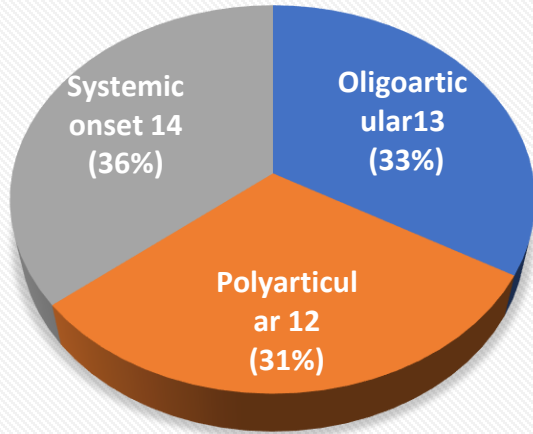
GENDER



REGION

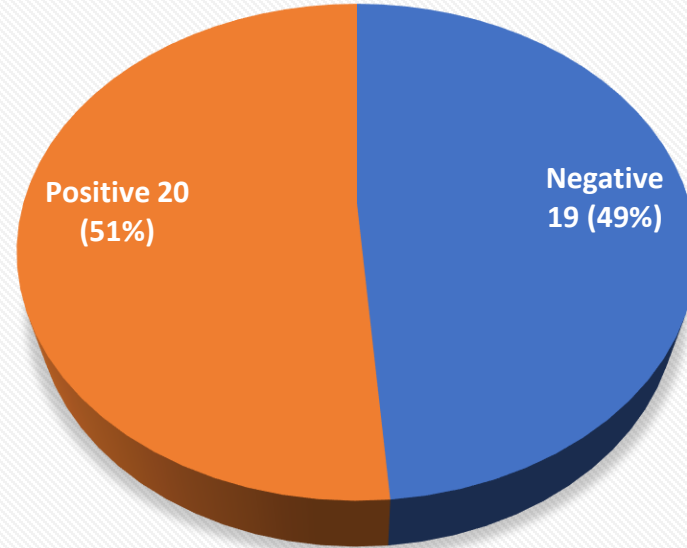


JIA Subtype



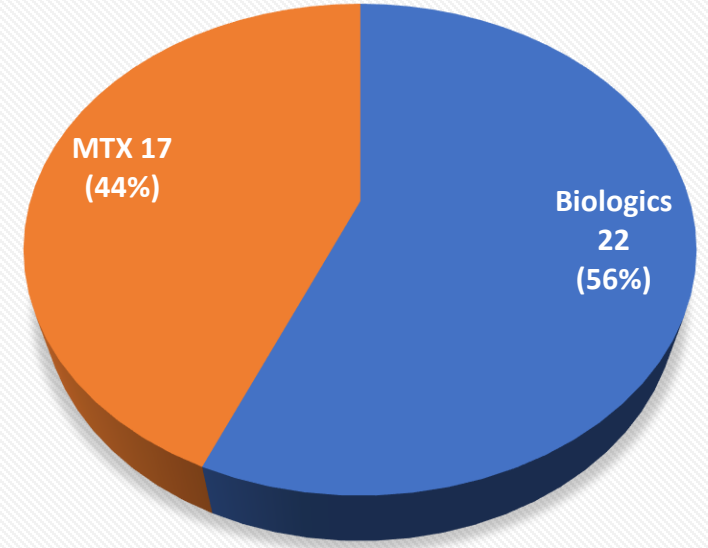
■ Oligoarticular ■ Polyarticular ■ Systemic onset

ANA Subtype



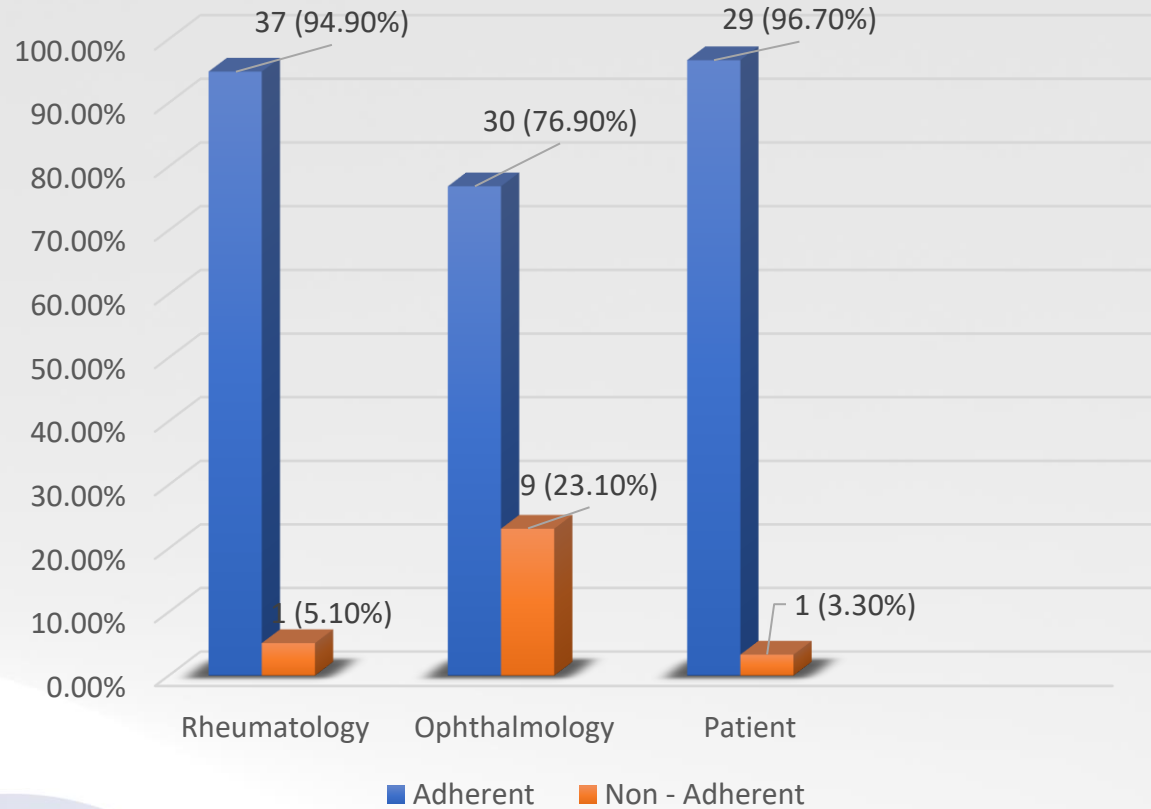
■ Negati...

Medications

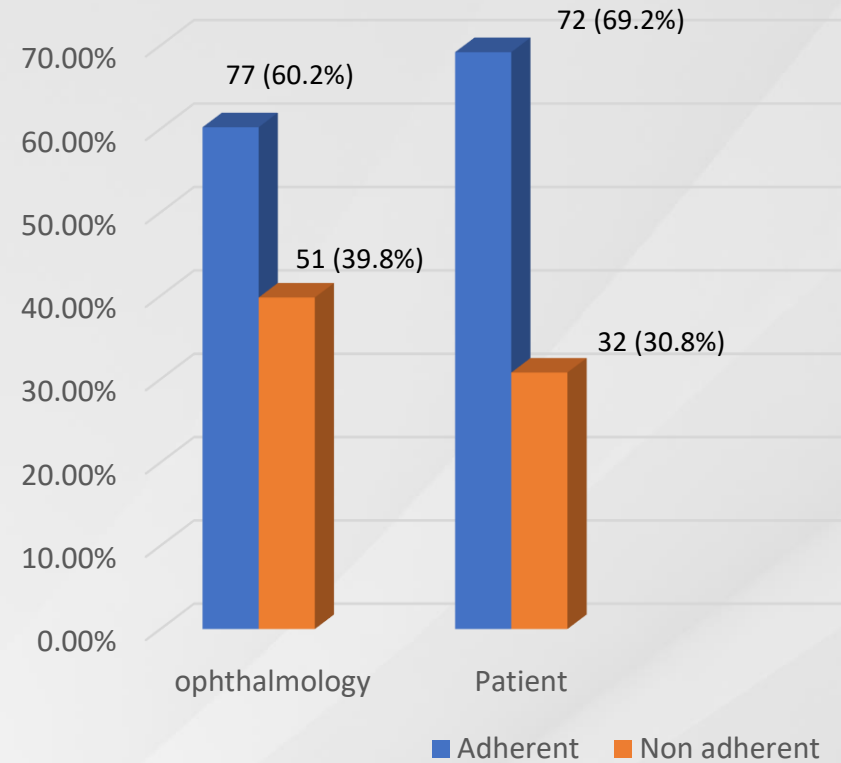


■ Biologics ■ MTX

First visit adherence



The 5-year average overall adherence to screening guidelines



Results

- One patient developed uveitis during the study period.
- Significant association was found between age of JIA patients and patient adherence, $p = 0.037$.

Variables	Non-adherent (n=12)	Adherent (n=72)	p-Value
Age at diagnosis	3.06±1.85	4.14±3.31	0.037
Gender			
Male	12 (37.5)	20 (27.8)	0.362
Female	20 (62.5)	52 (72.2)	
ANA at diagnosis			
Negative	16 (50.0)	31 (43.1)	0.530
Positive	16 (50.0)	41 (56.9)	
RF at diagnosis			
Negative	25 (78.1)	47 (65.3)	0.357
Positive	3 (9.4)	8 (11.1)	
Not done	4 (12.5)	17 (23.6)	
Medications			
MTX	19 (59.4)	32 (44.4)	0.203
Bio	13 (40.6)	40 (55.6)	
Uveitis			
No	29 (90.6)	69 (95.8)	0.369
Yes	3 (9.4)	3 (4.2)	

Previous studies

- A study published in 2015, which was the first epidemiological JIA study conducted in Oman ,showed that compared to Western countries, there was a higher frequency of polyarticular disease and a lack of occurrence of uveitis
- Walscheid et al prospectively studied adherence of JIA patients with screening recommendations in 557 patients. They found that 201 patients (22%) were screened infrequently. In their study, non-adherence correlated significantly with younger age at JIA diagnosis, shorter JIA disease duration, JIA oligoarthritis subtype and positive antinuclear antibody status. Non-adherence was also found to be more prevalent in high-risk category of patients and associated with reduced visual acuity at initial uveitis diagnosis.

Conclusion

- There is a need to improve ophthalmology service adherence to the screening criteria.
- While patients' adherence to the first visit is high, their adherence throughout the five years needs improvement.
- In our cohort, although all patients had risk factors for uveitis, only one developed uveitis.

