

Commentary: What is new in the epidemiology of HLA-B27-related uveitis?

The authors aim to study seasonal variation and systemic associations in HLA-B27-related uveitis (HBU). The study^[1] was designed as a retrospective observational chart review conducted for 5 years (January 2015–December 2019). They have divided their study population into three groups: X, Y, and Z. Group X had new cases presented from January 2017 to December 2019 and were studied for incidence patterns. Group Y represented cases with ≥ 1 year follow up and were studied for the systemic associations. Group Z included cases with ≥ 4 episodes of active uveitis and were studied for the recurrence pattern. A year was divided into three segments of the year (SoY): 1. November–February, 2. March–June, 3. July–October.

Results of the study^[1]

1. Out of the 157 cases of HLA-B27-associated uveitis, 136 (86%) cases were HLA B27 positive
2. Young males were commonly affected
3. The authors report that the least incidence of uveitis occurred in Group X (incidence group) during SoY2: from March to June in all the 3 years
4. Also, only 22.85% patients presented in transition season
5. Amongst the cases studied in Group Y, almost 48% of cases were diagnosed as spondylo-arthropathies. Of them, around 24% had ankylosing spondylitis
6. In Group Z, more than 1/2 the total number of episodes per patient occurring in the same SoY (SoY Max) was seen 56% of cases. So, Y1 was the most common period where recurrences occurred.

Key messages

1. HLA-B27-related uveitis patients may present to ophthalmologists in specific months of the year in terms of incidence and recurrences
2. Ophthalmologists should plan for surgical intervention or tapering of immunomodulatory therapy after understanding their pattern of recurrence
3. Moreover, uveitis can be the presenting feature of HLA-B27-related systemic disease or the only feature of the disease

What does the literature say?

Anterior uveitis is the most common type of uveitis, wherein most of the cases, the etiology remained unknown (idiopathic). HLA-B27 associated anterior uveitis is a very common cause of noninfectious anterior uveitis as evidenced in previous studies.^[2] It has a higher preponderance amongst young males, and the reported study shows the same. HLA-B27 positivity indicates the disease severity in patients diagnosed with ankylosing spondylitis.^[3]

Various studies have reported seasonal variations in uveitis. A study by Mercanti *et al.* from North-Eastern Italy showed more frequent recurrences in the cold (from November to February) and transitional months (October and from March to May).^[4] Another study from Finland showed increase in the incidence of all uveitis cases in the warm and transitional

seasons compared with the cold season, but there was no seasonal variation in incidence in uveitis related to ankylosing spondylitis.^[5] The climatic patterns vary between countries. Therefore, a similar study from India by Kaiser *et al.* showed a distinctly higher number of cases were seen in winters followed by transitional season and minimum in summer.^[6] An interesting observation by Ebringer *et al.* is that increased seasonal variation was noted in HLA-B27 negative anterior uveitis.^[7]

The author has found that more cases of recurrences occurred during winter period compared to summer period. Also, least incidence occurred in summer. The previous Indian study also reflects the same pattern.^[6] The authors also mention few cases that mimicked endogenous endophthalmitis, but HLA-B27 positivity was not mentioned. More insights into the pathophysiology behind the seasonal variations and HLA-B27 positivity are desired. Variation in thrombocytes and platelet-lymphocyte rate and their correlation with ankylosing spondylitis and rheumatoid arthritis in spring and winter has been recently reported.^[8] The author could also provide more information on such biochemical parameters in the studied population.

Seasonal fluctuations have to be kept in mind considering the changing patterns in global climate. Studying the patterns will make us more vigilant in treating patients with uveitis. This shall translate into better practice patterns to plan surgical interventions in the expected quiescent period. However, better planned studies are needed to confirm this hypothesis.

S Bala Murugan, Pranesh Balasubramaniam¹

Uveitis Services, Aravind Eye Hospital, Thavalakuppam, Pondicherry, ¹Cataract Services, Aravind Eye Hospital, Coimbatore, Tamil Nadu, India

Correspondence to: Dr. S Bala Murugan, Chief Consultant, Uveitis Services, Aravind Eye Hospital, Havalakuppam, Cuddalore Main Road, Pondicherry - 605 007, India. E-mail: drbalamuruganms@gmail.com

References

1. Kawali A, Zulaikha V, Srinivasan S, Mahendradas P, Kumar J, Shetty R. HLA-B27-related uveitis and seasonal variation—an Indian perspective. *Indian J Ophthalmol* 2020;68:1863-6.
2. González MM, Solano MM, Porco TC, Oldenburg CE, Acharya NR, Lin SC, *et al.* Epidemiology of uveitis in a US population-based study. *J Ophthalmic Inflamm Infect* 2018;8:6.
3. Mekhola M, Chowdhury MA, Ahmed MS, Khan A, Paul S. Frequency of HLA-B27 gene among patients with ankylosing spondylitis and its consequences on clinical manifestation. *BIRDEM Medical Journal* 2019;9:188-92.
4. Mercanti A, Parolini B, Bonora A, Lequaglie Q, Tomazzoli L. Epidemiology of endogenous uveitis in north-eastern Italy. Analysis of 655 new cases. *Acta Ophthalmol Scand* 2001;79:64-8.
5. Päivönsalo-Hietanen T, Tuominen J, Saari KM. Seasonal variation of endogenous uveitis in south-western Finland. *Acta Ophthalmol Scand* 1998;76:599-602.
6. Kauser H, Islam F, Khan T, Gupta VS, Kochar S. A study on the pattern of uveitis and any seasonal variation in the incidence of uveitis at a tertiary care hospital of Delhi, India. *DJO* 2019;29:30-4.

7. Ebringer R, White L, McCoy R, Tait B. Seasonal variation of acute anterior uveitis: Differences between HLA-B27 positive and HLA-B27 negative disease. *Br J Ophthalmol* 1985;69:202-4.
8. Enginar AU, Kacar C. Neutrophil-lymphocyte and platelet-lymphocyte rate and their seasonal differences in ankylosing spondylitis and rheumatoid arthritis patients using anti-TNF medication. *Bratisl Lek Listy* 2019;120:586-92.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/ijo.IJO_1143_20

Cite this article as: Murugan SB, Balasubramaniam P. Commentary: What is new in the epidemiology of HLA-B27-related uveitis?. *Indian J Ophthalmol* 2020;68:1867-8.