

Commentary: Epidemiological study in uveitis - Does it help?

In this issue, authors have described the pattern of uveitis from a tertiary eye care center in the Himalayan belt in North India. Although the findings were more or less the same as those in regional studies done in different parts of India, several findings provided food for thought.^[1] An interesting finding that grabbed my attention was that they did not find any case of Vogt-Koyanagi-Harada disease (VKH). VKH has been reported from almost all other parts of India, including in a recent study from North India.^[2] Infectious uveitis was found more commonly than non-infectious uveitis, with tuberculosis being the most common infectious etiology in this study. In recent years, tubercular uveitis has been recognized as a very common etiology in India as well as in other parts of the world. Bansal *et al.*^[3] described a new tubercular uveitic entity, the multifocal tubercular serpiginoid choroiditis, which is now a well-accepted phenotypic presentation of ocular tuberculosis. Gupta *et al.*^[4] provided the predictive ocular signs of tubercular uveitis, which has helped ophthalmologists to diagnose this type of uveitis with precision. Similarly, features of sarcoid uveitis have been well elucidated, leading to increased recognition of this entity.^[5] The recent revised guidelines for diagnosis of sarcoidosis will increase the detection of this condition with more accuracy.^[6] The authors have noted a higher incidence of sympathetic ophthalmia in this series. Sympathetic ophthalmia due to penetrating injury has reduced considerably; however, pars plana vitrectomy is now recognized as an emerging cause for developing sympathetic ophthalmia.

Uveitis is a complex multifactorial inflammatory disease that comprises 30 uveitic diseases. The causes of uveitis are known to vary in different populations depending upon their geographical, racial, and socioeconomic factors with recognized change in patterns over time. Two recent studies from India have addressed such changes in the pattern of uveitis identified in the population studied.^[7,8] With better understanding of the immunology and advanced diagnostic tests in the armamentarium, a specific etiological diagnosis can be established in higher percentage of uveitic entities that were earlier presumed to be idiopathic. Diagnostic techniques such as anterior chamber tap, iris biopsy, vitreous biopsy, fine needle aspiration biopsy, and chorio-retinal biopsy are being increasingly performed for a specific diagnosis.^[9] Imaging modalities such as high resolution computed tomography of the chest has been found to be superior to X-ray chest in the diagnosis of ocular TB or sarcoid and are now routinely ordered by uveitis specialists due to the better diagnostic yield in identifying tuberculous and sarcoid uveitis. Clinical pattern recognition supported by immunological tests such as Mantoux test and QuantiFERON TB Gold test coupled with high-resolution CT chest can often clinch the diagnosis of tubercular uveitis. Polymerase chain reaction from aqueous or vitreous samples has emerged in recent years as an invaluable test to identify causative organism in infectious uveitis. It may be indispensable in the diagnosis of viral anterior or posterior uveitis and in tubercular uveitis. In addition, real-time PCR provides a viable copy of the organism in the specimen tested. In a study of 100 consecutive intraocular specimens, real-time PCR provided or confirmed diagnosis in 70% cases with

sensitivity, specificity, and positive and negative predictive values of 90.2%, 93.9%, 93.9%, and 90.2%, respectively.^[10] However, the major limitation is the availability, with only a few centers in India having molecular diagnostic testing.

Dissemination of knowledge through scientific publications in recent times from the country enabled ophthalmologists dealing with uveitis to be aware of new uveitis entities such as *Leptospira uveitis*, Lyme disease, West Nile virus, Rickettsial uveitis, and post-typhoid fever uveitis.

The Standardization of Uveitis Nomenclature (SUN) study has provided clear guidelines on labeling anterior, intermediate, posterior and panuveitis in 2005, which are now adopted all over the world.^[11] New studies from SUN published in 2021 using computer-based data analysis provided new classification criteria of several uveitic entities.^[12] In a study from India, computer-based data analysis has been used in the study of the pattern of scleritis.^[13] This also provides an opportunity to do a multicenter collaborative study. An example of such a study is Collaborative Ocular Tuberculosis Study (COTS), which analyzed the data of 1485 eyes of 945 patients from 25 international eye centers.^[14] Such big data analysis can provide valuable information about various uveitis entities with high accuracy.

It is of paramount importance to study the pattern of uveitis in various geographic locations of the country. Information gathered from such studies can be used to formulate clinical and basic science research in uveitis, which will not only improve the understanding of several uveitic diseases prevalent in the country but also provide better patient care of this enigmatic disease. It is also important to study whether there is a change in the pattern of uveitis over the time. Many hospitals are now conducting computer data-based studies as such studies can be done without much difficulty and with precision.

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