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# Serpiginoid choroiditis, tuberculosis, and sarcoidosis

## Dear Editor,

Recently, Dr. Joob and Wiwanitkit submitted a comment of our previous publication regarding "Serpiginoid choroiditis associated with presumed ocular tuberculosis: A case report." They suggested that the case we reported might be a case of sarcoidosis and proposed two reasons for that: first, a previous report has shown that the clinical sign of sarcoidosis might be improved by using antimycobacterial drugs. Second, there is no positive confirmation from molecular diagnosis in our case.

However, we still believe that the intraocular inflammation of our patient was highly associated with the infection of tuberculosis. In our case, the patient suffered from continuous progression of bilateral choroiditis despite a high dosage of systemic corticosteroids and immunomodulatory agents for more than 1 year. Her condition was finally controlled after discontinuation of all immunosuppressive therapies and introduction of antituberculosis therapy (ATT). We believed that the possibility and chance of "the condition was of pure inflammation and accidentally became easy to be controlled when we shifted the treatment" was quite low in this patient. Besides, neither imaging (chest X-ray or computed tomography) nor laboratory (serum calcium and level of angiotensin-converting enzyme) finding could support the diagnosis of sarcoidosis as well. Moreover, her chorioretinal condition remained stable without any progression for 2 years after discontinuation of all therapies including steroids, immunomodulatory agents, and ATT.

On the other hand, we agreed with the authors that we still cannot make sure that the choroiditis of this patient was caused by the direct infection of mycobacteria because the results of polymerase chain reaction (PCR) of intraocular fluid were negative. Previous studies have shown that the sensitivities of PCR in tuberculosis uveitis were as low as 38%–77%, and the agreement of diagnosis for tuberculosis uveitis among experts was very low with a mean kappa value of 0.24.<sup>[1,2]</sup> There were many evidences showing that the infection of mycobacteria may trigger systemic immune response and could be a reason for rheumatoid diseases including sarcoidosis.<sup>[3,4]</sup> Therefore, systemic corticosteroids or immunomodulatory agents should also be used for many

of the cases. We still strongly suggest that clinicians should add ATT if their patients have never been treated before because there was a previous study showing that, even without strong bacteriology evidence, ATT may result in clinical improvement of uveitis in patients in nonendemic countries.<sup>[5]</sup>

In conclusion, we thanked the author for raising the possibility of inflammatory etiology in our case. More studies would be needed to explore the actual pathophysiology and immunopathogenesis of tuberculosis uveitis. We agreed that there was some possibility of other autoimmune diseases in our case and hoped that there will be some new diagnostic techniques with higher sensitivity for diagnosing these cases in future.

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## **Conflicts of interest**

The author declares that there are no conflicts of interests of this paper.

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