

PATTERNS OF VITAMIN D LEVELS IN UVEITIS PATIENTS

Purpose: There are links between autoimmunity and vitamin D deficiency. Vitamin D supplementation is being trialled for some auto-immune diseases. Animal studies have demonstrated that calcitriol inhibits the development of experimental autoimmune uveitis (EAU), and has potential to reverse already-developed EAU; however few clinical studies exist. We therefore aim to investigate the relationship between serum vitamin D levels and uveitis activity.

Method: An observational case-control study recruiting patients with active and inactive non-infectious uveitis from two Victorian tertiary hospitals and private ophthalmic practice was performed. Patients were recruited between February and September 2017. All patients had a serum 25-hydroxyvitamin-D measurement. Analysis was performed between active and inactive groups, and demographically-matched data from the ABS Nutrition Survey 2011-2012.

Results: 37 patients with active non-infectious uveitis and 41 patients with inactive non-infectious uveitis were identified, with a median age of 47. The median (IQR) level of serum vitamin D in active uveitis was 58nmol/L (34,74.5), significantly lower than the inactive uveitis group at 66nmol/L (56,81) ($p=0.0323$). The active uveitis group was found to have lower serum vitamin D levels than ABS controls, who have a median (IQR) of 60nmol/L (44,67).

Conclusion: Patients with active uveitis have lower serum vitamin D levels than inactive controls. We postulate that low serum vitamin D levels predispose to uveitis activity; as we performed the serum vitamin measurement at the time of activity it is unlikely that the uveitis caused the low vitamin D levels. Further studies are recommended to determine the efficacy of vitamin D supplementation for uveitis.