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Pars Plana Vitrectomy for the Treatment of Uveitis

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Abstract

Purpose: To review and summarize evidence in the medical literature in regards to the use of pars plana vitrectomy in the management of uveitis.

Design: Systematic literature review

Methods: A systematic literature search was conducted for relevant articles on pars plana vitrectomy for the management of uveitis. Results from the studies were compiled and analyzed.

Results: Thirty-four articles, published from 2005 through 2014, were included in the final data analysis. Thirty-two manuscripts were from retrospective case series and 2 manuscripts were from randomized pilot studies. The median Scottish Intercollegiate Guidelines Network (SIGN) level of evidence grade was 3 and the median Oxford Center for Evidence-based Medicine (OCEBM) level of evidence grade was 4. Fewer than 50% of the articles in the current study applied Standardization of Uveitis Nomenclature (SUN) criteria in regards to reporting the anatomic location of uveitis, fewer than 25% of studies applied SUN criteria in regards to the reporting of anterior chamber cells before and after PPV, fewer than 10% of studies applied SUN criteria to the grading of anterior chamber flare before and after PPV, and fewer than 10% of studies applied standardized criteria to the grading of vitreous haze after PPV. Overall, 627 patients and 708 total eyes undergoing PPV for uveitis were included. The average reported age off all patients was 43.4 years. The median duration of uveitis prior to PPV reported in the studies was 36.1 months (range 4-198). The median follow-up after PPV reported in the studies was 18.9 months (range 2-114). Vision was reported for 519 eyes and was improved in 356 eyes (69%), unchanged in 95 eyes (18%), and worse in 68 eyes (13%) following PPV. Pre-operatively, 157/300 (52%) eyes in these studies had documented cystoid macular edema compared to 112/300 (37%) eyes postoperatively. Median use of oral corticosteroids improved from 48% pre-operatively, to 12% post-operatively amongst the reporting studies. Median use of other immunosuppressive medications decreased from 56% pre-operatively, to 36% post-operatively amongst the reporting studies.

Conclusions: While nearly all studies continue to report favorable outcomes of PPV in the management of uveitis, the quality of data remains limited by a lack of application of standardized reporting outcomes, limitations in study design, and a paucity of prospective data.