

Impact of systemic corticosteroids following scleral buckling repair of retinal detachment on surgical outcomes and pain management

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Purpose

Scleral buckles (SB) often induce significant post-operative pain, which some physicians elect to treat with oral (PO) steroids. Given their proven ability to reduce inflammation and post-operative pain in other contexts, steroids can be an attractive option for medical management following surgical repair with SB. To our knowledge, no formal studies have investigated the utility of systemic steroids following SB surgery.

Methods

An IRB-approved retrospective chart review identified all patients at The Ohio State University Wexner Medical Center over a three-year period with retinal detachment (RD) repair involving SB use that were then split into PO steroid-receiving and non-receiving groups during the post-operative period. Patient demographics (age, gender, ethnicity, weight, diabetic status, pre-operative steroid use) and surgical detail (operative eye, primary SB status, SB element, reoperation status) were compared with χ^2 , Mann-Whitney U, and Fisher's exact analyses. Additionally, visual acuity (VA), intraocular pressure (IOP), and reported pain across post-operative day one (POD1), week one (POW1), and month one (POM1) were compared.

Results

41 (35%) of 116 identified patients underwent RD repair involving SB, of which eight (20%) received post-operative PO steroids. Four patients received them after POD1, four patients after POW1. A significant proportion of the steroid cohort was undergoing re-operation after previous vitrectomy for retinal detachment repair (75% versus 57%, $p=0.048$). The steroid and non-steroid groups showed no difference in pre-operative and POD1 VA, IOP, and reported discomfort. While a higher proportion of patients'

subsequent encounter notes mentioned pain at POW1 and POM1 ($p=0.045$ and $p=0.011$, respectively), six (75%) steroid recipients reported subjective improvement in eye pain after initiation.

Conclusions

This retrospective chart review identified a positive association between reoperation status and prescribed PO steroids after RD repair involving SB use. Despite noted ocular discomfort at follow-up visits, a majority of PO corticosteroid users experienced relief after utilization. Steroids did not affect VA and IOP during the immediate postoperative period. Given the retrospective nature of the study, future direction with prospective analysis will further clarify the role for adjunct systemic steroid use after SB.