Diplopia following sub-tenon’s anaesthesia: an unusual complication

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Abstract Diplopia is a rare but well recognised complication following retrobulbar and peribulbar local anaesthesia but it has not been widely reported following sub-tenon’s local anaesthesia (STLA). We report on a 76-year-old woman who developed vertical diplopia after left phacoemulsification. She had received a STLA. She had left hypotropia measuring 30 prism diopters for near and distance. She was managed with occlusion but there was no improvement in her findings over 6 months. Ocular motility opinion was then sought and a presumptive diagnosis of inferior rectus fibrosis was made. She subsequently underwent a left inferior rectus recession using adjustable sutures. Postoperatively she had a residual left hypotropia measuring 8 prism dioptres and single vision. Possible causes of inferior rectus fibrosis include muscle damage during traumatic sub-tenon’s block or myotoxicity due to local anaesthetic agents. This case highlights the importance of close supervision of inexperienced staff administering regional anaesthetics.

Keywords Cataract extraction · Diplopia · Anaesthesia · Strabismus · Sub-tenon’s

Introduction

Diplopia is a rare but well recognised complication following retrobulbar and peribulbar local anaesthesia [1, 2]. However, it has not been widely reported following sub-tenon’s local anaesthesia (STLA) [3, 4].

Sub-tenon’s local anaesthesia is established as a safe and effective popular technique for providing anaesthesia and akinesia of the eye during cataract surgery. STLA is a safe and effective technique. In addition to providing akinesia, STLA has been shown to provide greater intra-operative patient comfort, and a lower incidence of posterior capsular rupture with vitreous loss. Well-known drawbacks of STLA include chemosis, and subconjunctival haemorrhage [5]. Diplopia has not been widely reported following STLA [3, 4]. We therefore report such a case.

Case

A 76-year-old woman developed vertical diplopia after undergoing left phacoemulsification and intraocular lens implantation under STLA. The STLA consisted of 4 ml of 2% lignocaine delivered with a Stevens’ cannula. A periorbital haematoma was noted post-operatively. It later emerged that the STLA was given by an unsupervised anaesthetic trainee.

The diplopia was present on the first post-operative day and presumed to be due to left trochlear nerve palsy. The patient underwent 6 months of orthoptic