Conjunctival compression sutures: An effective method of addressing hypotony after trabeculectomy or trabeculectomy-related procedures

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**Purpose:** Over-filtration is a well known complication of trabeculectomy and related procedures such as bleb needling, especially when utilising adjunctive antimetabolites. Secondary hypotony can result in reduced visual acuity and compromise long-term surgical success. Persistent hypotony unresponsive to conservative management requires intervention, however, the optimal modality remains unclear. We describe an effective adaptation of placing conjunctival compression sutures directly over the scleral flap.

**Methods:** We present a retrospective consecutive case-series of all patients who underwent conjunctival compression suturing (CCS) from 2012-2013 at Manchester Royal Eye Hospital. Under Sub-Tenon’s anaesthesia, the eye was reformed with BSS or Healon and two 9/0 nylon figure-of-eight transconjunctival sutures were placed horizontally across the bleb; the first over the anterior flap/ostium, and the second over the posterior flap edge. Sutures were tied tightly to reduce flow through the flap. Intraocular pressure was closely followed up postoperatively.

**Results:** Six patients underwent CCS, median age 77.4 years (range = 25.6-82.8); four had hypotony post-needling and two post-augmented trabeculectomy. The median number of hypotonous days was 22 (range = 9-153) with five patients experiencing loss of vision (median = 0.64 LogMAR, range = 0.20-1.80). All patients had successful symptom resolution within one week with corresponding clinical improvement. IOP control was maintained in 83% of patients (median = 9.5 mmHg, range = 9-13 mmHg) with a median follow-up of 69 days (range = 48-538), without the use of topical pressure-lowering agents. One patient required beta-blocker to maintain optimal IOP.

**Conclusions:** This series demonstrates that conjunctival compression sutures can successfully provide long-term control of trabeculectomy-bleb-related hypotony. This technique offers an effective alternative for glaucoma surgeons in addressing post-trabeculectomy hypotony.