Long-term outcomes following the surgical repair of traumatic cyclodialysis clefts
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Purpose: To evaluate the long-term prognoses of direct and indirect cycloplexy for the surgical treatment of traumatic cyclodialysis clefts.

Methods: Retrospective consecutive case series of 14 eyes of 14 patients. A detailed ophthalmologic examination, which included gonioscopy and ultrasound biomicroscopy (UBM), was performed before and after the surgical closure of the traumatic cyclodialysis cleft. Indirect cyclodialysis cleft closure was undertaken using cyclocryotherapy. In cases of unsuccessful cyclocryotherapy, direct surgical cycloplexy was performed with a double-lamellar limbal-based scleral flap technique.

Results: The mean age was 40.4 years (16-62 years) and the mean presenting IOP was 7 mmHg (2-14 mmHg). Eleven patients (79%) presented with hypotony maculopathy whilst optic disc swelling was evident in 6 patients (43%). During intraoperative gonioscopy 9 eyes had one cleft present, 4 eyes had two clefts and 1 eye had 3 clefts. The most common location was the nasal quadrant with the mean size of the cleft being 2 clock hours. Forty-four percent of eyes undergoing primary cyclocryotherapy achieved successful cleft closure. Direct surgical closure was required in 9 eyes (64%). The mean IOP following complete cleft closure at 1 day, 1 week, 1 month, 3 months, 6 months and 12 months were 38.5 mmHg, 13.9 mmHg, 11.6 mmHg, 12.1 mmHg respectively. The mean follow-up time was 32 months (8-73 months) with the mean final IOP being 12.6 mmHg (8-18 mmHg). Seven eyes (50%) improved at least 2 Snellen lines visual acuity.

Conclusions: Excellent long-term visual outcomes can be achieved following cyclodialysis repair even when there has been persistent hypotony maculopathy. Direct surgical cleft closure is a safe and effective treatment for hypotony where cryotherapy has failed.