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The Mini-Steamroll: A Modified Abbreviated Variation of the Steamroller Maneuver Following Pneumatic Retinopexy for Rhegmatogenous Retinal Detachment with Large Superior Breaks

Chidalu Edechi<sup>1</sup>, MSc, Aurora Pecaku<sup>1</sup>, MD, Ahmed El-Sehemy<sup>1</sup>, PhD, Isabela Martins Melo<sup>1</sup>, MD, Rajeev H. Muni<sup>1</sup>, MD, MSc,

<sup>1</sup>University of Toronto Department of Ophthalmology & Vision Sciences, Toronto,

**Introduction:** Proper patient positioning is crucial for the success of pneumatic retinopexy (PnR), a minimally invasive procedure which uses intravitreal gas injection to treat rhegmatogenous retinal detachment (RRD). This prospective case series describes the mini-steamroll, a novel positioning maneuver for patients with large superior breaks in rhegmatogenous retinal detachment (RRD) following pneumatic retinopexy (PnR).

**Methods:** "A total of six patients who presented with RRD to St. Michael's Hospital, Toronto, were included in this case series. All patients had RRD and underwent PnR. After obtaining a full ocular history and detailed depressed scleral exam at presentation (Best corrected visual acuity (BCVA), duration of vision loss or visual field defect, foveal status, extension of retinal detachment, and presence of retinal breaks or lattice degeneration), all patients underwent ultra-widefield retinal imaging at baseline and repeat imaging 10 minutes after the gas injection.

Patients were injected with sulfur hexafluoride (SF<sub>6</sub>), and they were required to maintain a face-down position immediately after the procedure.

After the gas injection, patients were instructed to perform the mini-steamroll maneuver which consists of a face-down position for ten minutes followed by positioning to the retinal break.

The mini-steam roll maneuver was considered successful if we observed a significant reduction in the amount of subretinal fluid after 10 min face-down. In case of failure (no substantial reduction in subretinal fluid volume), the patient would switch to the full steamroller maneuver.

**Results:** In each case, the mini-steamroll maneuver resulted in a significant reduction in subretinal fluid, aiding in reattachment. The technique was effective for patients with large superior breaks or multiple smaller superior breaks, allowing subretinal fluid to escape into the vitreous cavity during face-down positioning. This approach was well-tolerated and encouraged patient compliance with treatment.

**Conclusions:** "This case series demonstrates that the mini-steamroll maneuver may be considered an alternative for patient positioning following PnR in certain cases.

Mini steamroll has the potential to carry the benefits of both direct-to-the-break and the steamroller maneuver techniques that are currently in use.