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USE OF SF6 GAS TO TREAT POST-GLAUCOMA SURGERY HYPOTONY

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Introduction:

The purpose was to describe a new technique involving the injection of sulfur hexafluoride (SF6) gas in the anterior chamber (A/C) for the management of hypotony in patients with previous glaucoma surgery.

Materials and methods:

Seven patients were included in this prospective case series. All patients had advanced glaucoma that was managed surgically either by trabeculectomy (6 patients) or Ahmed valve (1 patient). All patients presented with intraocular pressure (IOP) <7 mm Hg, shallow A/C, and ultrasound images of choroidal detachment and ciliary body detachment. Patients' hypotony was treated with 0.4 to 0.6 mL of 100% pure SF6 injection in the A/C followed by supine posture. The purpose of this injection was dual: to displace the ciliary body to its normal position and restore aqueous humor normal production, and to block aqueous humor outflow through bubble formation, causing an increase in IOP.

Results:

The surgical technique was successful in all 7 patients with IOP normalization (>10 mm Hg), choroidal and ciliary body attachment, and A/C depth increase within the first week after surgery.

Conclusions:

A surgical technique of SF6 injection in the A/C for patients with choroidal detachment and hypotony after glaucoma surgery seems to lead to the correction of persistent postoperative hypotony through ciliary body attachment.