

Optimizing Filtration Surgery Procedures in African-Derived Populations: Trabeculectomy and Preserflo

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Background: African-derived populations are disproportionately affected by primary open-angle glaucoma (POAG) and face increased risks of surgical failure due to anatomical and genetic factors. This report identifies challenges in glaucoma care and strategies to optimize surgical outcomes in patients from African-derived backgrounds.

Methods: Six UK-based consultant ophthalmic glaucoma surgeons with extensive experience in diverse patient populations convened to discuss challenges and key approaches for optimising glaucoma filtration surgery outcomes in African-derived populations. Their opinions were supplemented by published literature to propose tailored recommendations and address some of the known challenges in this important patient group.

Results: Surgical treatment of glaucoma among African-derived populations includes challenges such as Tenon's thickness, variable wound healing, and an increased risk of scarring. Preoperatively, outcomes can be improved through patient education, counselling and ocular surface optimisation, including reduction of preservative exposure. Intraoperatively, surgeons may consider the use of general anaesthesia or conscious sedation in younger patients, higher or prolonged mitomycin C exposure tailored to individual risk, and separate closure of Tenon's capsule and conjunctiva to reduce bleb failure. Proactive postoperative care should include intensified steroid regimens and 5-fluorouracil use when indicated.

Conclusion: These insights support the delivery of culturally informed, evidence-based glaucoma care tailored to patients from African-derived backgrounds. By adopting a personalised and proactive approach, healthcare professionals may achieve more consistent and favourable surgical outcomes in this high-risk group.

Keywords: PreserFlo MicroShunt, African-derived populations, glaucoma, trabeculectomy, mitomycin C, bleb morphology, postoperative care, surgical optimisation, efficacy

Introduction

Glaucoma, commonly associated with elevated intraocular pressure (IOP), causes progressive optic neuropathy and is the second leading cause of blindness in Europe.^{1,2} Primary open angle glaucoma (POAG), the most common subtype, affected about 53 million people aged 40–80 years globally in 2020, with numbers projected to rise to 76 million by 2040.^{3,4}

To prevent visual impairment, national and international clinical guidelines from the National Institute of Health Care and Excellence (NICE), the European Glaucoma Society and the American Academy of Ophthalmology recommend laser trabeculoplasty, topical medications, and surgical procedures aimed at reducing IOP.^{2,3,5} Surgical options include trabeculectomy, a well-established procedure for reducing IOP. In recent times, evidence supporting less invasive



procedures such as the PreserFlo MicroShunt (PFMS; InnFocus/Santen, Miami, FL, USA), have become well-established.⁶ The PFMS glaucoma drainage system is intended for reduction of IOP in eyes of patients with POAG where IOP remains uncontrollable while on maximum tolerated medical therapy and/or where glaucoma progression warrants surgery.⁷ Introduced in Europe in 2019, this biocompatible subconjunctival ab-externo device offers an alternative to trabeculectomy for patients whose medical treatments no longer control IOP.^{8,9} As the use of PFMS grows, clinical and anecdotal experiences highlight differences in surgical techniques compared with trabeculectomy, particularly in high-risk populations.^{6,9–12}

Risk factors for all patients with POAG include older age, elevated IOP, a family history of glaucoma and ethnicity.^{2,3} It is well-documented that glaucoma disproportionately affects patients from African-derived backgrounds.^{2,13} Research has shown that people of African ancestry are not only at increased risk of being affected by glaucoma, but also likely to experience more advanced glaucoma, a greater progression of visual field loss, and visual impairment or even blindness.^{10,14,15} A genome-wide association study involving 11,275 people of African ancestry identified 46 loci out of 174 known unique risk loci associated with POAG.¹⁵

Despite advancements in surgical techniques, patients from African-derived backgrounds consistently experience lower surgical success rates following glaucoma surgery compared to White populations.^{8,14} In a retrospective case-controlled study involving African ancestry patients, trabeculectomy achieved a success rate of only 46% without additional medication, with nearly a third of procedures failing within a year.¹⁴ Lower success rates of glaucoma surgery among patients from African-derived backgrounds are attributed to a combination of factors such as younger patient age at surgery, low pre-operative visual acuity and genetic predisposition for increased post-operative scarring.^{14,16}

Studies also suggest that African-derived populations tend to have smaller trabecular meshwork height, thus reducing outflow facility.^{17,18} Additionally, they often have a thinner central corneal thickness, potentially contributing to the development of POAG.^{17,19,20} Darker skin tones correlate with increased scarring, identified at the genetic level, requiring a proactive and aggressive postoperative treatment regimen to mitigate complications.^{21,22} Furthermore, patients from African-derived backgrounds often have thicker and more prominent Tenon's tissue.²³ This may risk more frequent postoperative obstruction to the subconjunctival outflow pathway if it is not immobilised in the correct anatomical position.

Socio-cultural differences can also contribute to treatment outcomes following glaucoma surgery in addition to the anatomical and genetic variations.^{14,16} African-derived populations encounter significant non-clinical barriers, including systemic healthcare inequalities and racial biases. A recent survey indicated that the majority of respondents from African-derived backgrounds experienced racism from healthcare professionals, potentially undermining trust and patient outcomes.²⁴

In response to these challenges, a group of UK-based consultant ophthalmic surgeons convened at a workshop to identify challenges and exchange insights on glaucoma filtration surgery, including PFMS and trabeculectomy across preoperative, intraoperative, and postoperative stages among patients from African-derived backgrounds. This perspective represents the first structured consensus addressing perioperative optimisation in African-derived populations, that aims to highlight the panel's experience and recommendations on the technical aspects of trabeculectomy and PFMS surgery and peri-operative care in this high-risk population specifically, and identify areas requiring improvement to bridge the gaps in current practice.

Methods

A two-step approach was used to develop this article.

Literature Review

First, a comprehensive literature review was conducted using PubMed and Google Scholar, to identify previous practices, clinical outcomes, and recent advancements in the management of glaucoma specifically affecting patients from African-derived backgrounds. PubMed and Google Scholar were systematically searched from 1 January 2015 to 1 January 2025 to identify relevant peer-reviewed articles. Search terms included: “glaucoma”, “African”, “trabeculectomy”, “Preserflo”, “filtration surgery”, and additional related keywords. Articles were initially screened based on title and abstract, and duplicates, non-English language studies, and studies involving non-human subjects were excluded (Figure 1). The remaining articles underwent full-text review to extract insights on clinical practices, treatment outcomes, complications,

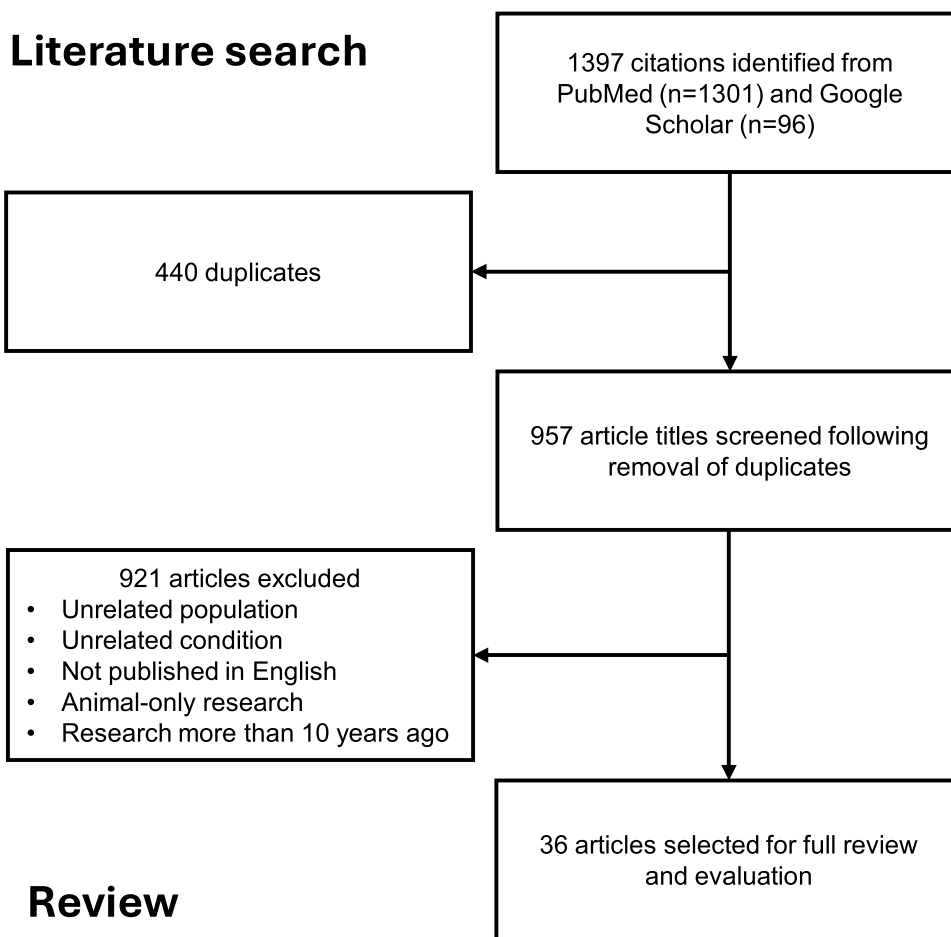


Figure 1 Literature analysis.

and specific management strategies. These insights informed and enriched the discussion topics explored during the expert workshop.

Expert Panel Workshop

Secondly, a structured round-table discussion was convened involving six consultant ophthalmic surgeons based in the UK. The expert panel was selected based on a minimum of 20 years' clinical experience in ophthalmology, a collective portfolio of over 200 peer-reviewed publications, and direct involvement in managing more than 2,000 patients of African-derived backgrounds undergoing glaucoma surgery. During the round-table meeting, moderated discussions explored barriers to effective glaucoma management, specific challenges related to surgical procedures and peri-operative management strategies tailored to African-derived populations. Expert opinions were sought on best practices, potential modifications to standard surgical techniques, and specific perioperative care recommendations. The discussion was audio-recorded and transcribed. The transcript was examined to identify recurring ideas, patterns or themes. Those themes were then combined into a clear descriptive summary of the expert panel's shared conclusions or advice and thematically analysed to synthesise the collective recommendations. The resulting consensus recommendations from this meeting were integrated with findings from the literature review to inform practical guidance and optimise glaucoma surgical outcomes for patients from African-derived backgrounds, with particular focus on PFMS and trabeculectomy procedures.

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Results

The insights and recommendations presented in this section reflect the outcomes of the expert advisory board discussion, informed by both clinical experience and supporting literature in the context of treating patients from African-derived backgrounds with glaucoma. In the absence of robust comparative clinical trial data, the guidance presented reflects expert opinion integrated with the current evidence base.

Considerations for Glaucoma Filtration Surgery

Trabeculectomy remains the most performed surgical procedure for lowering IOP in glaucoma patients.²⁵ Its efficacy in achieving low target pressures, especially in patients with advanced disease, is well-documented.²⁵ The procedure also allows for postoperative flexibility, such as suture manipulation and bleb needling, to modulate outcomes.²⁵ However, compared with PFMS surgery,²⁶ trabeculectomy is associated with a high burden of postoperative management, increased risk of both early and late complications including bleb leaks, hypotony, and patient discomfort particularly due to the positioning and morphology of the bleb. These challenges are particularly pronounced in patients at high risk of surgical failure, such as those of African descent.

All surgeons agreed that PFMS can demonstrate several short-term advantages over trabeculectomy in the postoperative period.^{6,12} Based on the literature, stable IOP is often achieved sooner, leading to better early pressure outcomes than with trabeculectomy.²⁷ Patients benefit from a more manageable intensity of follow-up, with fewer required visits (the surgeons typically schedule visits on Day 1, Week 1, Week 4, and Week 8 or 12), making postoperative care more economically predictable and logistically feasible for some patients.²⁸ Additionally, PFMS is associated with fewer postoperative complications and improved visual comfort compared with trabeculectomy.²⁶ Patients often experience quicker visual recovery with potentially reduced astigmatism.²⁶ Whilst these latter points in particular would benefit all patients, they may be considered especially advantageous in younger patients such as those often seen in African-derived populations. In addition to clinical outcomes, resource utilisation and cost have been considered in other settings, with some cost analyses suggesting potential savings associated with PFMS compared with trabeculectomy.²⁶

PFMS diverts aqueous humour and forms blebs more posteriorly than trabeculectomy.^{9,29} This posterior positioning has been quantified by anterior segment optical coherence tomography (OCT) imaging, which demonstrated a significantly greater distance from the limbus in PFMS blebs.²⁹ Due to this difference in positioning, PFMS blebs are associated with fewer complications such as conjunctival cysts, which are more common in trabeculectomy blebs located closer to the limbus.²⁹ PFMS blebs have also been shown to be more lower-lying, with a shallower episcleral lake than trabeculectomy blebs.²⁹ This morphology likely contributes to a lower incidence of complications that can cause discomfort.²⁹ Although the lower risk of sight threatening complications, such as bleb-related endophthalmitis from filtration surgery may be of more clinical impact. While further studies are needed to directly correlate these anatomical features with patient-reported outcomes, the reduction in discomfort and bleb-related complications is likely to be clinically meaningful and was consistently reported by the expert panel.

There had been initial reluctance among some surgeons to use PFMS in patients from African-derived backgrounds. Despite understanding that filtration surgery can be less effective in African-derived populations, many surgeons favour trabeculectomy due to their familiarity with the procedure, and the belief that it yields better outcomes. However, an increasing number of surgeons are gaining experience with PFMS in this patient population and observing results that are often comparable to those achieved with trabeculectomy.^{6,12} To optimise outcomes in these patients, it is crucial for surgeons to be confident not only in performing the PFMS procedure but also tailoring their approach to pre-, intra- and post-operative care.

Strategies and Approaches Preoperatively for Patients from African-Derived Backgrounds

The expert panel provided several tailored strategies aimed at optimising glaucoma surgical outcomes specifically for patients from African-derived backgrounds during the preoperative phase. These strategies focused on patient consent,

education, ocular surface preparation, and specific surgical considerations, reflecting the need to address both clinical and non-clinical challenges, which are commonly observed within this patient population.

Patient Education and Communication

The consultant ophthalmic surgeons emphasised the important role of patient education, ensuring clear communication about potential postoperative scenarios to foster trust and strengthen the surgeon-patient partnership for all patients (Table 1). The expert panel suggested discussing scenarios such as “numerical” hypotony, defined as IOP below 6 mmHg without accompanying anatomical complications, that typically resolves spontaneously. Ensuring patients understand possible outcomes may help with managing their expectations and facilitating more open discussions about postoperative care, thereby potentially improving patient adherence to follow-up regimens.

Furthermore, the expert panel recommended conducting an additional preoperative consultation to address any concerns whenever possible and advised of the need to remain mindful of delays or issues with surgical scheduling, as prolonged waiting periods can inadvertently heighten patient anxiety.

Ocular Surface Optimisation

Optimising the ocular surface prior to surgery was highlighted to improve surgical outcomes (Table 2). Conjunctival inflammation, often exacerbated by topical medications, was identified as a significant risk factor for poorer outcomes in glaucoma filtration surgery. Therefore, it was recommended that medications causing inflammation should be discontinued at least two weeks before surgery, where feasible. Some experts also recommended switching patients to preservative-free medications in specific cases to further reduce ocular surface inflammation, although this practice lacks support from randomised controlled trials. Topical corticosteroids with limited intraocular penetration prescribed a week prior to surgery were also suggested as beneficial, although based on the literature, caution was advised due to the potential for steroid-induced IOP elevations in case of unexpected delays before surgery.²⁸

Table 1 Recommendations to Improve Consent and Education of Patients from African-Derived Backgrounds with Glaucoma

Educate patients and build trust	<ul style="list-style-type: none"> • Educate patients about potential outcomes, such as “numerical” hypotony (low pressure below 6 mmHg, without anatomical changes), which typically resolves without intervention. • Build trust with patients to ensure they feel comfortable with the surgeon. • Emphasise the importance of discussing follow-up care and recommend regular follow-up visits.
Pre-operative discussions	<ul style="list-style-type: none"> • Where possible, conduct more than one separate pre-operative discussion, especially for any patients who may not fully understand the procedure, and may require more time to understand the need for surgery. • Be mindful of waitlist issues that may affect scheduling, which can inadvertently increase patient anxiety.

Table 2 Recommendations to Optimise the Ocular Surface in Preparation for Glaucoma Surgery in Patients from African-Derived Backgrounds

Reduce conjunctival inflammation	<ul style="list-style-type: none"> • Surgery is more challenging in the presence of conjunctival inflammation, which is associated with poorer outcomes. Therefore, it is advisable to suspend all medications likely to cause conjunctival inflammation at least two weeks prior to surgery.
Preservative-free medications	<ul style="list-style-type: none"> • Switching to preservative-free medications may be warranted in some instances.
Use topical corticosteroids	<ul style="list-style-type: none"> • Topical steroids, which can be prescribed a week before bleb-forming surgery, may improve outcomes. However, caution is needed as steroids may raise IOP if patients do not adhere to the regimen.²⁸

Abbreviation: IOP, intraocular pressure.

Additional Pre-Surgical Considerations

Further presurgical considerations specific to patients from African-derived backgrounds were outlined (Table 3). It was recommended to avoid combining bleb-forming glaucoma surgeries with cataract surgery to reduce the risk of post-operative scarring. While the optimal interval between cataract surgery and filtration surgery remains uncertain, laser flare photometry studies indicate subclinical inflammation can persist beyond 30 days post-cataract surgery, potentially affecting the surgical success rates of subsequent glaucoma surgery.³⁰ In contrast, the experts advised that performing surgery 3–6 months after a cataract operation generally avoids significant flare-ups. Therefore, carefully timing the sequence of procedures may enhance surgical outcomes.

Intraoperative Strategies and Approaches

Intraoperative management of glaucoma surgery in African-derived populations requires particular attention to surgical planning and execution due to anatomical and clinical characteristics. Several strategies were identified by the expert panel, covering anaesthesia choice, bleeding control, use of mitomycin C (MMC), structural techniques, and adjunctive treatments.

Anaesthesia

Anaesthetic strategy is an important consideration in this population. Patients from African-derived backgrounds often present at a younger age, which may necessitate the use of general anaesthesia or conscious sedation to improve surgical conditions (Table 4). Furthermore, sickle cell disease is more prevalent in African-derived populations, and low oxygen tension can trigger red-cell sickling, so careful avoidance of peri-operative hypoxia is particularly important when operating in African-derived populations who may have undiagnosed sickle hemoglobinopathies.³¹

Table 3 Other Pre-Surgical Considerations to Take into Account in Patients from African-Derived Backgrounds with Glaucoma

Separate procedures	<ul style="list-style-type: none"> • Avoid combining bleb-forming surgery with cataract surgery to reduce inflammation or scarring.
Surgical downtime	<ul style="list-style-type: none"> • The ideal downtime between cataract surgery and PFMS filtration surgery remains undetermined. • Laser flare photometry studies show subclinical flare more than 30 days post-cataract surgery but no significant flares following surgery with PFMS after 3 months.³⁰

Abbreviation: PFMS, Preserflo Microshunt.

Table 4 Recommendations for Intraoperative Management in Patients from African-Derived Backgrounds Undergoing Glaucoma Surgery

Anaesthesia	<ul style="list-style-type: none"> • Patients from African-derived backgrounds tend to present younger than other ethnicities, therefore general anaesthesia or sedation may be considered.
Managing bleeding	<ul style="list-style-type: none"> • Presence of blood in the Tenon's capsule will compromise the efficacy of mitomycin C (MMC)*; therefore, targeted removal of blood vessels via diathermy is recommended.^{32,33} • However, among patients from African-derived backgrounds, high diathermy power across the entire sclera should be avoided to prevent necrosis, inflammation and excessive scarring.
MMC Application* - Modulation of scarring	<ul style="list-style-type: none"> • Typical MMC doses vary for filtration surgery. It was unanimously agreed by the panel that a minimum MMC concentration of 0.4mg/mL, applied for a minimum of 3 minutes, is essential among African-derived populations, with some surgeons using 0.5 mg/mL, or even up to 1.0 mg/mL in the most challenging cases.⁹ • The duration of MMC application varied between 3–5 minutes, depending on surgeon preference and patient's risk profile.

Notes: *MMC is not approved for the specific use shown here. Long term effects of MMC with the use of this device have not been evaluated. Necessary precautions and interventions on the use of MMC are highly recommended.

Abbreviation: MMC, mitomycin C.

Intraoperative Haemostasis

Controlling bleeding during surgery is critical, especially since blood in the Tenon's capsule can compromise the effectiveness of MMC. The surgeons recommended the use of targeted diathermy to remove blood vessels selectively. However, it was cautioned that high diathermy power across the entire sclera should be avoided due to increased risk of tissue necrosis, inflammation, and excessive postoperative scarring.^{32,33} The panel advised that liberal use of topical adrenalin perioperatively may significantly reduce bleeding. Furthermore, sympathomimetic agents, such as apraclonidine, can also be utilised for their vasoconstrictive properties, but their impact on pupillary mydriasis must be observed.

Use of Mitomycin-C

A minimum concentration of 0.4 mg/mL MMC applied for at least 3 minutes is commonly suggested, with application times ranging from 3 to 5 minutes based on individual patient risk profiles.⁹ In very high-risk or repeat surgical cases, one surgeon used MMC concentrations up to 1.0 mg/mL. However, there was no consensus on an upper level, with most using 0.4 mg/mL and two surgeons recommending 0.5 mg/mL.

Surgical Techniques

Techniques can also be adapted during surgery to the needs of patients from African-derived backgrounds (Table 5). In cases where stenting is used to prevent hypotony, the expert panel advised timely removal, usually within 1 to 3 weeks, as delayed removal may contribute to suboptimal bleb formation. This is particularly critical given the heightened risk of fibrosis and the risk of adverse bleb morphology in this population.

Tenon's capsule management was another area of focus. The surgeons emphasised the importance of locating and repositioning retracted Tenon's tissue prior to conjunctival closure. In some cases, a two-layer closure technique – suturing the Tenon's and conjunctiva separately, was preferred to ensure all Tenon's tissue was secured, which might help reduce the incidence of limbal cystic blebs, postoperative scarring and bleb failure. There is limited evidence discussing Tenon excision in this population, but the panel's experience supports Tenon preservation to achieve good posterior flow of aqueous humour and bleb formation. Furthermore, one surgeon advised that PFMS, compared with trabeculectomy, resulted in a low rate of bleb-related complications. However, subconjunctival injection of MMC may increase the risk.

Adjunctive Treatments

Adjunctive intraoperative medications were considered to support surgical outcomes (Table 6). Although the use of intracameral Avastin (bevacizumab) at the end of surgery remains off-label and only weakly supported by clinical evidence,³⁴ two surgeons on the expert panel reported using it in high-risk patients, including patients from African-derived backgrounds, to potentially limit scarring. Orbital floor steroids were more widely accepted although not universally used for patients with poor compliance to topical treatments.

Healaflo, a cross-linked sodium hyaluronate gel, was used by one surgeon on the expert panel as a space-maintaining and anti-scarring agent. It is slowly absorbed and can support filtration bleb function while helping to stabilise IOP.³⁵

Table 5 Recommendations Regarding Structural Techniques During Glaucoma Surgery in Patients from African-Derived Backgrounds

Stenting	<ul style="list-style-type: none"> • If inserting a stent to prevent hypotony, the surgeon should plan to remove it in a timely manner – usually within 1–3 weeks because delaying removal may lead to sub-optimal outcomes such as a smaller bleb, especially in patients from African-derived backgrounds.
Closure of the Tenon's Capsule	<ul style="list-style-type: none"> • Prior to closing the conjunctiva, ensure all retracted Tenon's are located and brought forward using appropriate forceps. • Some surgeons may perform the closure in two separate layers (Tenon's and conjunctiva sutured individually) to ensure that no Tenon's are left loose.

Table 6 Recommendations Regarding the Postoperative Transition Period After Glaucoma Surgery in Patients from African-Derived Backgrounds

Medication given at the end of an operation	<ul style="list-style-type: none"> ● Some surgeons believe that intracameral Avastin (bevacizumab)[†] administered at the end of the procedure is an effective strategy, in patients from African-derived backgrounds and other high-risk patients.³⁴ <ul style="list-style-type: none"> ○ There is currently little clinical evidence to support Avastin's use during ocular surgery, though it is increasingly used by surgeons.³⁴ ○ Orbital floor steroids may provide longer lasting effects, and are used in African-derived populations. ○ Use in patients who are unlikely to take drops. ● Healaflow is a cross-linked sodium hyaluronate used by some surgeons because it is gradually absorbed by the body to prevent scarring following glaucoma surgery, as well as maintaining functional filtration blebs and in controlling and stabilising IOP.³⁵
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Notes: [†]Avastin (bevacizumab) is not approved for the specific use shown here. Long term effects of Avastin with the use of this device have not been evaluated. Necessary precautions and interventions on the use of Avastin are highly recommended.

Abbreviation: IOP, intraocular pressure.

These intraoperative adaptations may improve outcomes in African-derived populations who face higher surgical risks. Further research to validate the effectiveness of these tailored approaches is warranted, particularly for adjunctive agents like Avastin and Healaflow.³⁴

Postoperative Considerations for African-Derived Populations

Several postoperative strategies were proposed by the expert panel to enhance postoperative outcomes in African-derived populations. (Table 7). A key recommendation was the implementation of very intensive steroid eye drop regimens aimed at suppressing the postoperative inflammatory response. The surgeons recommended initiating steroid drops as frequently as every 1–2 hours during the first postoperative week, followed by a gradual taper to six times daily over the following three weeks. For patients from African-derived backgrounds, the total duration of steroid therapy may be extended beyond the usual 3–4 months of standard practice, and in some cases, continuing for up to a year or longer at lower maintenance doses (eg, four times daily) to address the propensity for fibrotic healing in this population, particularly if pseudophakic.

A viscous ointment-based antibiotic-steroid combination was suggested by the panel as an additional overnight steroid delivery method to ensure continuous anti-inflammatory coverage during the healing period, although some surgeons restricted this to patients with suboptimal compliance to drop regimens. In addition to steroid therapy, the use of 5-fluorouracil injections during postoperative visits was endorsed by all experts.³⁶ These injections were recommended to be used proactively in patients from African-derived backgrounds, rather than reactively, to prevent early bleb fibrosis. According to the literature early application of 5-fluorouracil can modulate fibroblast activity and improve the long-term success of bleb function by preventing excessive scarring at the filtration site.³⁶

Table 7 Recommendations Regarding Pharmacological Treatments in Patients from African-Derived Backgrounds with Glaucoma

Steroid eye drops	<ul style="list-style-type: none"> ● Prescribe intensive post-operative drop regimens – possibly preservative-free, to not induce pro-inflammatory ocular surface pathways. ● Start with steroids every 2-hours (or even hourly for the first week) and reduce to 6 times a day for the next 3 weeks. ● Extend the total duration of post-operative steroid treatment to 3–4 months, and generally longer (up to 1-year or more) at lower doses, such as up to 4 times a day. ● Maxitrol ointment post-surgery was suggested as a means to provide additional steroid cover at night, in case of non/poor compliance with post-op steroid drops.
5-Fluorouracil injections	<ul style="list-style-type: none"> ● Proactively use 5-Fluorouracil during PFMS post-operative visits to address early bleb fibrosis, especially in patients from African-derived backgrounds, to reduce the risk of early bleb failure.³⁶

Abbreviation: PFMS, Preserflo Microshunt.

These pharmacological strategies aim to reduce the incidence of postoperative complications and improve long-term surgical success. Further studies are needed to determine the optimal duration and dosing of these treatments, specifically in African-derived populations.

Strengths and Limitations

A strength of this article is the use of expert consensus to provide clinically relevant guidance and offer practical insights in an area where population-specific evidence is only gradually expanding. However, reliance on expert opinion also represents a limitation in the absence of robust comparative clinical evidence evaluating surgical outcomes specifically in African-derived populations. These recommendations should therefore be viewed as provisional and highlight the need for more targeted, population-focused research. We also acknowledge that restricting the literature search to PubMed and Google Scholar may have excluded studies indexed in other databases, although these databases remain a comprehensive and widely used source for peer-reviewed ophthalmic research.

Conclusions

The primary goal of glaucoma surgery is to preserve patients' vision, as untreated disease progression can ultimately lead to blindness. Glaucoma disproportionately affects patients from African-derived backgrounds, who face increased risks of disease progression and surgical failure due to genetic and anatomical factors, as highlighted by the expert panel and published evidence. The insights and experiences from the surgeons emphasise targeted surgical modification, intensified anti-scarring strategies, and proactive postoperative management including a prolonged topical steroid regimen, and 5-fluorouracil injections to suppress fibrosis to achieve favourable surgical outcomes in this high-risk group. In conclusion, by implementing carefully adapted strategies in this population, healthcare professionals may achieve better surgical success and improve the overall health of their patients when performing glaucoma filtration surgery procedures.

Data Sharing Statement

This publication does not include datasets, therefore there are no additional data for distribution.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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