Phacotrab group, respectively, underwent YAG capsulotomy. To our understanding, Yag cap should not be counted as additional surgery as the occurrence of posterior capsular opacification depends upon multiple factors including type of cataract, surgeons expertise. Its inclusion influences the complication rate and hence affects the success of intervention.

As observed in the study, complications in the Phacotrab group were found to be more than the Phacogroup which were obviously related more to the trabeculectomy part. In our experience, complications like hypotony and related ones can be taken care of by using meticulous technique, judicious use of mitomycin C and use of releasable sutures.

This has also been observed in the meta-analysis of randomize control trials comparing trabeculectomy with releasable versus without releasable sutures, which concluded that trabeculectomy without releasable sutures were associated with higher frequency of hypotony and flat anterior chamber postoperatively.  

Randomly selected eyes with cataract and advanced glaucoma are at greater risk of wipe out due to fluctuations in IOP and hypotony intraoperatively and postoperatively. However, better outcomes can be achieved for mild to moderate glaucoma patients undergoing phacoemulsification alone without the need of phacotrabeculectomy as in advanced glaucoma patients. Several studies have been done identifying the risk of wipe out phenomenon in patients with advanced glaucoma. Costa et al suggested the role of high IOP or severe hypotony after surgery for wipe out phenomenon.

We appreciate the work of the authors to have a fairly long follow-up postsurgery for both the groups. A larger sample size would be more helpful in deciding the treatment approach.

The authors have mentioned about the surgeries being performed by different surgeons who may have different levels of expertise which can affect the outcome of the study. As recommended by the authors, uniformity in the technique and surgeon would give more valuable information without influencing the results.

All the patients enrolled in the study belonged to a common ethnic background. Whether the findings can be extrapolated to patients of other ethnicity is a question.

We once again congratulate the authors for their work.

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Responses to: Phacoemulsification Versus Phacotrabecelectomy in Primary Angle-closure Glaucoma With Cataract: Long-term Clinical Outcomes

In Reply:

We do very much appreciate the interests and comments of Drs Jain and Dubey on our paper. At recruitment and before surgery, there were 31.3% of patients in our cohort with early visual field (VF) loss, 28.1% with moderate VF loss, 40.6% with severe VF loss in the phacoemulsification group, and 33.3% with early VF loss, 33.3% with moderate VF loss, and 39.4% with severe VF loss in phacotrabecelectomy group. The distribution of VF losses were not statistically significantly different between the 2 treatment groups (P < 0.05).

Seven of the 10 phacoemulsification eyes requiring subsequent trabeculectomy were medically uncontrolled before surgery.

Given that posterior capsular opacification is widely regarded as a complication of cataract surgery and it occurs in a relatively small proportion of postoperative patients, we included its treatment, namely YAG laser posterior capsulotomy, as “additional surgery.” However, even if we have excluded YAG laser capsulotomy from statistical analysis, the P-value would still be 0.653.

Therefore, there was still no statistically significant difference between the 2 treatment groups with regard to additional surgery, with or without including YAG laser capsulotomy as “additional surgery.”

Advanced disease and preoperative medically uncontrolled intraocular pressure (IOP) might be the risk factors in our 2 patients with worse visual acuity after surgery. Several studies reported older age, more advanced disease, preoperative split fixation in visual fields, higher preoperative IOP, postoperative hypotony, and postoperative choroidal effusion, as risk factors for wipeout. We suggest that any advantage in IOP control by combined surgery over cataract extraction alone should be carefully weighed against the sufferings and costs of surgical complications and their management, especially in older patients, advanced disease, and uncontrolled preoperative IOP.

We acknowledge the inherent shortcomings in our study. A future randomized controlled trial with a larger sample size allowing subgroup analysis for different glaucoma severities, a standardized surgical technique, and perhaps an even longer follow-up duration, would be valuable.

We would very much like to thank Drs Jain and Dubey again for allowing us this opportunity to provide further clarifications on some important aspects of our paper.
COVID-19 Pandemic: Are We Back to Normal?

To the Editor:

We enthusiastically support Mahmoudinezhad and colleagues in their article “COVID-19 Pandemic: Are We Back to Normal?” and wish to add our heightened concern for open-angle glaucoma (OAG) patients of African descent (AD). COVID-19 infection disproportionately affects the African American population with Johns Hopkins University and American Community Surveys reporting rates of infection and death 3 times higher in majority Black counties when compared with majority White counties.1,2

Similar to COVID-19 infection, OAG also disproportionately affects persons of AD, who are on average 6 times more likely to be diagnosed with OAG, and experience earlier onset and increased severity compared with those of European descent (ED).3,4 The higher rates of both glaucoma and COVID-19 infection and their complications suggest the valid concerns of maintaining appropriate disease management outlined by Mahmoudinezhad and colleagues and novel approaches to maintain care are especially important for persons of AD.

Elevated intraocular pressure (IOP) has long been identified as a strong contributor to glaucoma pathophysiology. However, many patients with OAG either do not exhibit elevated IOP or experience continued disease progression despite low or medically reduced IOP, thus highlighting the multifactorial nature of the disease. Low ocular perfusion and/or impaired ocular circulation have long been identified as contributory mechanisms of OAG5 and persons of AD are known to have considerably higher rates of cardiovascular diseases, with early onset and high levels of severity.6 In our laboratories, we previously identified how ocular vascular health may be a more significant contributing factor in OAG patients of AD compared with ED. Significantly, we found lower blood flow biomarkers in all retinal/displaced blood vessels including those supplying the retina and optic nerve head in OAG patients of AD compared with ED.7 In addition, significantly larger reductions in retinal capillary and retinal blood flow were identified and strongly correlated with OAG changes in optic nerve head structure and macular thickness over 4 years in OAG patients of AD compared with ED.8 Furthermore, we observed higher retinal venous oxygen values and lower arterial venous difference (an estimation of retinal capillary oxygen extraction) in OAG patients of AD compared with patients of ED with statistically similar IOP and OAG disease stage status.9 Importantly, preliminary data suggests COVID-19 causes microvascular damage, inflammation, and thrombosis in various organs. Patients suffering from COVID-19 were found to have extensive endothelial injury and thrombi with microangiopathy throughout the lungs on autopsy.10,11 When compared with the autopsy of patients with influenza, patients with COVID-19 were 9 times more likely to have microthrombi present in the alveoli.10 Elevations of D-dimer and antiphospholipid antibodies support the proposed role of COVID-19 in the development of vascular disease and thrombogenesis.11,12 The damage caused by COVID-19 to the microvasculature of various organs systems such as the lungs may explain the higher rates of disease complications and death among patients with underlying cardiovascular comorbidities.12 In the microvasculature is thus a shared characteristic of both COVID-19 and glaucoma, and this mechanistic overlap highlights the urgent need to understand if COVID-19 elevates glaucoma risk in patients whose vascular health is compromised, especially in persons of AD.

We strongly support the concerns for appropriate ophthalmic disease management discussed by Mahmoudinezhad and colleagues as COVID-19 represents an emerging and immediate threat to human welfare and medical resource allocations. The shared vascular pathologies and similar epidemiological disparities between COVID-19 infection and OAG is a significant concern to be explored. In view of this, we suggest for the first time that a COVID-19 infection with its known microvascular insult may elevate the risk for glaucoma onset and progression especially in high-risk patient groups with vascular comorbidities and encourage clinicians to be aware of the possible elevated risk in persons of AD infected by COVID-19.

Brent Siesky, PhD*
Alon Harris, MS, PhD, FARVO†
Alice C. Verticchio Vercellin, MD‡∥
Nicholas Kalafatis, BS§
James C. Tsai, MD, MBA†∥
*Department of Ophthalmology, Icahn School of Medicine at Mount Sinai Hospital
†New York Eye and Ear Infirmary of Mount Sinai/Icahn School of Medicine at Mount Sinai
‡IRCICS—Foundationi Bieti, Rome
§Department of Ophthalmology, University of Pavia, Pavia, Italy
∥Indiana University School of Medicine, Indianapolis, IN

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