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CORRESPONDENCE

Comment on: Eponymous women in ophthalmology: syndromes with prominent eye manifestations named after female physicians

Peter B. M. Thomas[1] · Chrishan D. Gunasekera[2]

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Correspondence:

We read with interest Van Tassel et al.'s "Eponymous women in ophthalmology: syndromes with prominent eye manifestations named after female physicians" [1]. The study of medical eponyms unearths many interesting stories: some are interesting trivia (did Adolf von Baeyer really name barbiturates for a Bavarian barmaid called Barbara? [2]), others are profoundly upsetting (Hans Eppinger's investigation of concentration camp prisoners' life expectancy with only salt water to drink [3]). The description of gender imbalance among medical eponyms is certainly a worthy addition to the field.

In their opening paragraph Van Tassel et al. repeat the common assertion that there has been a "decline in eponym use". In 2016, we described the rise and fall of 8636 extant and extinct medical eponyms in PubMed's database of around 25 million articles spanning two centuries [4]. In Fig. 1 we present a new subset analysis of the use of 291 ophthalmic eponyms. The findings are consistent with those of the broader dataset. Eponyms are today used in the titles of more PubMed indexed entries than at any time in the past, and the annual growth remains rapid. Accounting for the inexorably increasing number of publications per year, we find a modest decrease in the prevalence of eponyms since their peak in the 1990s (to the levels seen around 1980). We find evidence to suggest that this decreasing prevalence can in part be accounted for by an increasing non-clinical presence on PubMed (by comparing eponym use to clinical words like "artery"). There was also evidence in our original study [4] (by comparison to a historical index of eponyms), that studies like ours are likely to underestimate eponym coinage—newly coined eponyms are not yet present in lists of common medical eponyms. Interestingly, we also found that coinage of well-established eponyms was brisk at the time that articles mourning their loss were originally being written [5].

In summary, there is no convincing evidence that medical or ophthalmic eponyms are in precipitous decline. Perpetuating the idea that they are could become self-fulfilling, discouraging new eponym coinage. This will do nothing to create a more even gender balance among medical eponyms.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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✉ Peter B. M. Thomas
pbmthomas@gmail.com

[1] NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London EC1V 9EL, UK

[2] Department of Ophthalmology, West Suffolk Hospital, Bury St Edmunds, UK

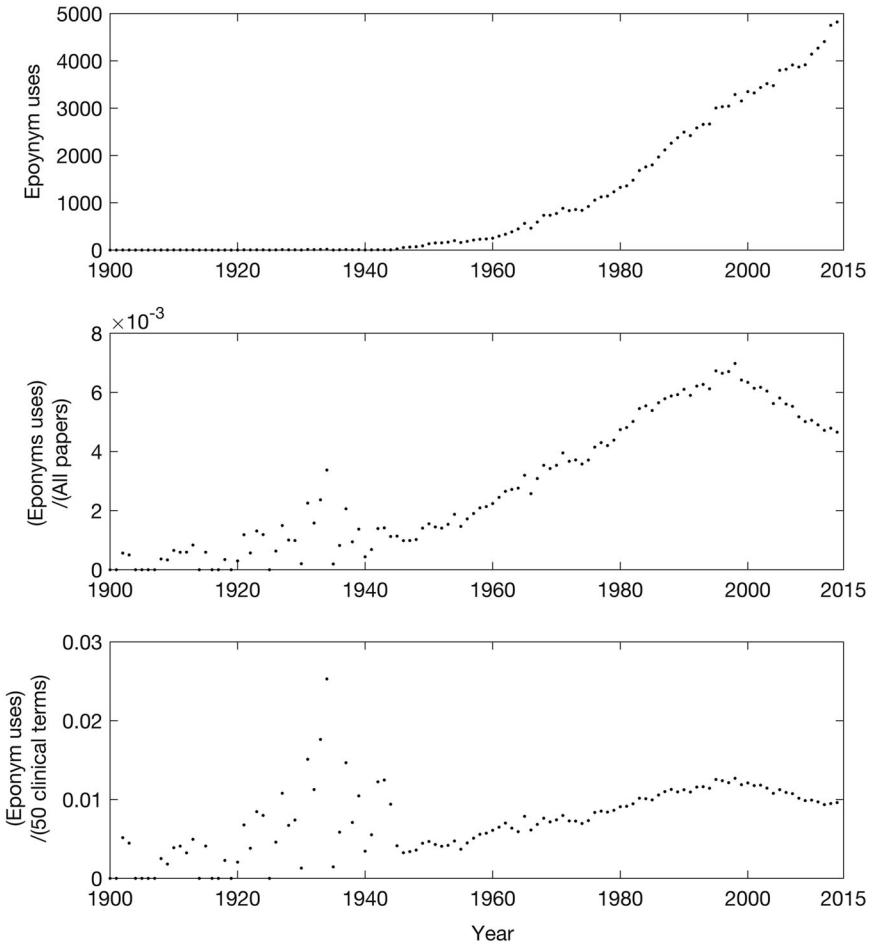

Fig. 1 Top—the number of uses of 291 ophthalmic eponyms in the title of PubMed indexed documents per year since 1900. Middle—the proportion of PubMed indexed documents using one of 291 ophthalmic eponyms in their title since 1900. Bottom—the ratio of PubMed indexed documents using one of 291 ophthalmic eponyms in their title to those using one of 50 common clinical terms since 1900

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Response to: Comment on: Eponymous women in ophthalmology: syndromes with prominent eye manifestations named after female physicians

Sarah H. Van Tassel[1] · Kira L. Segal[1] · Jessica B. Ciralsky[1] · Grace Sun[1]

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We thank Thomas and Gunasekera for their interest in our article [1], the premise of which is to celebrate the achievements of pioneering women in ophthalmology.

Empirical evidence demonstrates that eponym extinction overtook new eponym coinage in the 1980s, and the trend continues [2]. Eponym prevalence in journal article titles has been in decline since the early 1990s [2]; the letter from Thomas and Gunasekera affirms this observation with ophthalmic eponyms as well. These trends are in part due to the elimination of eponyms associated with Nazi physicians. Additionally, the eponymous David Cogan himself

✉ Sarah H. Van Tassel
sjh2006@med.cornell.edu

[1] Department of Ophthalmology, Weill Cornell Medicine, 1305 York Avenue, 11th floor, New York, NY 10021, USA

and others have called for reduced eponym coinage and use in favor of descriptive terms [3].

Eponyms commonly recognize one or two people, which may reflect influence, chance, seniority, politics, gender, or language rather than bearing witness to global discourse and collaborative scientific inquiry. For example, Tsuya Sakurai described the melanocytic iris hamartomas characteristic of neurofibromatosis type 1 [4], accompanied by her detailed illustrations, two years before Lisch's paper was published in the German language literature. Syndromes, the subject of our article, are particularly likely to be identified through the work of multiple individuals, each of whom describes clusters of signs and symptoms that may be subsequently identified as syndromic.

In the current era, an additional concern with eponyms is that varying use of the possessive and non-possessive forms is a challenge for search engines, which may produce incomplete disease-specific results depending on the term used [5]. This is a hindrance to scholarly research, medical writing, and information dissemination for patients and clinicians alike.

Eponyms honor contributors, serve as memory tools, and may be simpler than names routed in genetics, function, or symptoms (consider the eponymous lysosomal storage disorders). We agree with Thomas and Gunasekera that the decline in eponyms is not "precipitous," and there is no need to rapidly expunge eponyms from use. However, the empirical decline in eponym coinage as well as many authors' and investigators' reticence to eponyms suggests that future syndromic eponyms attributed to both male and female ophthalmologists will be rare. Thus, we recognize the historical contributions of the few women for whom ophthalmic syndromes are named.

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Comment on "Vitrectomy with scleral buckling versus with inferior retinectomy in treating primary rhegmatogenous retinal detachment with PVR and inferior breaks"

Upma Awasthi[1] · Rohini Grover[1] · Chetan Videkar[1] · Abhishek Varshney[1]

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To the Editor

We read the article by Eleinen and Mohalhal [1] with great interest. We applaud them to do head on comparison of scleral bucklng (SB) and retinectomy (RR) as a primary approach in patients with rhegmatogenous retinal detachment (RRD) with proliferative vitreoretinopathy (PVR) with inferior breaks. However, we would like to comment upon few points.

✉ Upma Awasthi
upma.awasthi2@gmail.com

[1] Department of Vitreoretina, CL Gupta Eye Institute, Moradabad 244001 Uttar Pradesh, India

In phakic patients, cataract surgery was done in the same sitting prior to RD surgery. Authors should have mentioned the method of IOL power calculation. In our experience it is better to pass the buckle before phacoemulsification and intraocular lens (IOL) implantation as maneuvering during buckling may cause anterior chamber instability and IOL decentration. Surgeries were done by multiple surgeons. Different surgeons have different approach for a case so it would have affected the decision for preferring one surgical technique over the other. Also, it would have been more informative if the criteria for preferring surgical technique would have been mentioned.

Authors have preferred 5000cS silicon oil in all cases with oil removal at 3 months. High viscosity silicon oils are preferred in cases where long term or permanent tamponade is required [2]. Moreover, 5000cS oil is lighter than water, thus inflammatory cytokines get settled in inferior unsupported space leading to inferior PVR changes [3]. So, if inferior tamponade was the purpose of preferring 5000cS, then heavy oils would have been better choice [4].

Authors have done regression analysis for finding correlation of seven factors with recurrence of RD. In multivariate regression, testing too many variables for the small sample size will overestimate associations.

Causes of higher IOP and better visual acuity in buckle group should have been discussed. Subgroup analysis for the grades of PVR would have been more informative regarding dealing with severe PVR. We appreciate authors for their choice of doing photocoagulation of bare choroid in cases of RR. Once again we applaud authors for sharing their experience.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Vitrectomy with scleral buckling versus with inferior retinectomy in treating primary rhegmatogenous retinal detachment with PVR and inferior breaks

Khaled G. Abu Eleinen[1] · Ahmed A. Mohalhal[1] · Dalia A. Ghalwash[1] · Ahmed A. Abdel-Kader[1] · Ahmed A. Ghalwash[2] · Islam A. Mohalhal[2] · Abdussalam M. Abdullatif[1]

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We would like to thank Awasthi et al. [1] for their interest in our paper and their insightful comments.

Phacoemulsification with three-piece intraocular lens (IOL) implantation was done in all phakic patients as we believe that removing the lens gives access to the ora and far retinal periphery and allows dealing with the anterior proliferative vitreoretinopathy (PVR). The axial length was measured using optical biometry (IOL Master; Carl Zeiss, Oberkochen, Germany). If the axial length measured by optical biometry was shorter than that of the other eye, the axial length measurement was verified with A-scan ultrasonography [2]. SRK/T formula with the manufacturer's

✉ Abdussalam M. Abdullatif
abdussalamabdullatif@kasralainy.edu.eg

[1] Department of Ophthalmology, Kasr El Aini Hospital, Cairo University, El-Manial, Cairo, Egypt

[2] Research Institute of Ophthalmology, Ministry of High Education, Giza, Egypt

recommended A-constant was used to calculate IOL power. The axial length adjustment with Wang–Koch modification was applied. The refractive value in the other eye determined the refractive aim in the operated eye.

In the Buckle group, 360 degrees encircling silicone band was inserted through four scleral tunnels at the beginning of surgery before phacoemulsification or inserting any trocars. The surgeries were done by two groups of surgeons according to their surgical preference, the first group adopted vitrectomy combined with scleral buckle and the second group adopted vitrectomy with retinectomy. Baseline characteristics of both groups were not statistically different which indicate that both groups were similar without any bias towards any of the two groups.

Heavy Silicon Oil Study which compares heavy and standard silicone oil (SO) in patients with inferior PVR failed to demonstrate superiority of a heavy tamponade [3]. Moreover, several complications have been associated with heavy SO surgery, such as prolonged intraocular inflammation and intraocular pressure increase, probably due to the early emulsification of heavy SO [4]. That is why we preferred to use SO (5000 cs) as a tamponading agent which has the least rate of emulsification [5].

The mean postoperative IOP was significantly higher in the Buckle group throughout the whole follow-up period. This may be due to impaired venous drainage from the vortex veins, leading to congestion of the ciliary body. The edematous ciliary body is displaced anteriorly, shifting the lens-iris diaphragm forward and resulting in narrowing of the angle [6]. Visual acuity was better at first month in the Buckle group, but this difference disappeared throughout the remaining follow-up period, achieving the same functional outcome.

The number of patients prevented subgroup analysis for the grades of PVR. Performing a prospective larger study for better statistical analysis will be a great idea. Once again, we would like to thank Awasthi et al. for sharing their comments.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Smartphone adaptor use for nasal endoscopy

Jerome How Ing Ha[1] · Suresh Reddy Sagili[1]

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✉ Jerome How Ing Ha
dr.jeromeha@gmail.com

[1] Department of Ophthalmology, Royal Shrewsbury Hospital, Mytton Oak Road, SY3 8XQ Shrewsbury, UK

Nasal endoscopic examination is an important part of the preoperative assessment in patients presenting with nasolacrimal duct obstruction, particularly when planning endoscopic dacryocystorhinostomy (DCR). Deviated nasal septum can impede the access to the middle meatus and identifying this preoperatively facilitates surgical planning for simultaneous septoplasty where indicated. Other pathologies such as synechia, nasal polyps and chronic

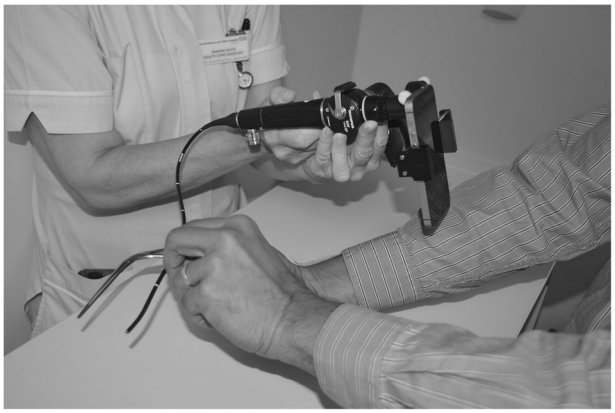

Fig. 1 Smartphone adaptor for nasal endoscopy set up

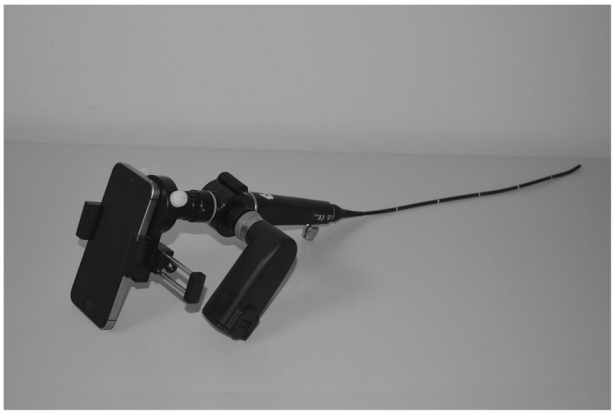

Fig. 2 Smartphone adaptor with the flexible nasal endoscope

rhino-sinusitis can also be identified during the nasal endoscopic examination preoperatively.

We routinely use a flexible endoscope for nasal examination in the clinic for preoperative assessment. A flexible endoscope is easier to use than a rigid endoscope [1] and is well tolerated without the need of topical nasal anaesthesia or decongestant. However, only one clinician can view through the eyepiece of the endoscope at any one time and it is not possible to demonstrate or teach simultaneously.

Using a smartphone adaptor enables live image display on the screen of the smartphone, which can be viewed by more than one clinician at a time [2].

It also allows the use of a flexible endoscope for removing silicone stents postoperatively, as the surgeon can use one hand to hold the forceps and the other to hold the tip of the flexible endoscope (Fig. 1). There is no need to hold the eyepiece of the endoscope, as this is attached to the smartphone and is held by an assistant (Fig. 1).

The smartphone adaptor (RVA Smart-Clamp) shown in figure 2 costs less than £115.00 and fits most of the-modern smartphones (Fig. 2). This adaptor can be used with a flexible or rigid endoscope with a 31.75 mm eyepiece. There are several varieties of smartphone adaptors available in the market and we do not have any financial interest in any of the adaptors. Smartphone adaptor is significantly cheaper and a less cumbersome alternative than a camera with monitor attachment required for displaying the image.

We use a smartphone adaptor for preoperative and postoperative examination in patients undergoing DCR (see Supplementary video) and find it very useful in training junior doctors/fellows in the oculoplastic clinic. Attaching the smartphone adaptor to the flexible endoscope frees a hand of the clinician to allow removal of silicone stents postoperatively (see Supplementary video). We find this particularly useful, as flexible endoscope is more comfortable for patients compared to a rigid endoscope and can be used without the need of topical nasal anaesthesia or decongestant.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Diagnostic accuracy and reliability of retinal pathology using the Forus 3nethra fundus camera compared to ultra wide-field imaging

Dana Y. Darwish[1] · Samir N. Patel[2] · Yan Gao[3] · Pooja Bhat[1] · Felix Y. Chau[1] · Jennifer I. Lim[1] · Judy E. Kim[4] · Jogin Jose[1] · Karyn E. Jonas[1] · R. V. Paul Chan[1,5] · Supriya D. Mehta[3] · Ann-Marie Lobo[1]

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Telemedicine programs provide an affordable method to screen for eye conditions in resource limited settings, but are impeded by costs of expensive imaging systems.

We performed a prospective pilot study at the Illinois Eye and Ear Infirmary to evaluate the accuracy and reliability of detecting retinal pathology using the Forus 3nethra (Forus) fundus camera compared to ultra wide-field (UWF) imaging with Optos 200Tx. Images were compared against clinical diagnosis by ophthalmoscopy as the reference standard.

Patients underwent mydriatic imaging with Optos and Forus. Three double-blinded graders independently evaluated Forus (45 degree, central, nasal, superior, and inferior views) and Optos (200 degree) images (Fig. 1) for the presence or absence of pathology, image clarity, and specific clinical diagnoses of diabetic retinopathy, choroidal lesions, or uveitis. Graders were asked to choose a diagnosis, rate confidence level in the diagnosis and determine if referral was needed. Responses were captured via a closed-ended survey (Qualtrics).

35 eyes of 18 patients were included. The accuracy of detecting any ocular pathology was similar between the Forus and Optos images (aggregate calculation of 3 graders): sensitivity 71% vs. 77% ($p = 0.60$); specificity 43% vs. 48%, ($p = 0.85$). Image quality results are summarized in Table 1. There was greater sensitivity for detection of choroidal lesions for Optos compared to Forus (93 vs. 33.3%) but similar sensitivity for uveitis (66.3 vs. 100%) and diabetic retinopathy (67 vs. 75%).

Inter-grader agreement was moderate among graders for both Forus and Optos with kappa statistics of 0.50 and 0.40, respectively. Rate of referral for clinical exam based on images were similar among graders at 74 and 76% for Forus and Optos, respectively.

This pilot study showed similar sensitivity and specificity for detecting any pathology with the Forus camera compared to UWF imaging. Forus' overall sensitivity of 71% in detecting any ocular pathology falls within the sensitivity range of 71–97.9% [1, 2] to detect referral-requiring pathology. Referral rates for clinical examination were similar between both modalities. The Forus images were graded as good or acceptable more often than UWF images, consistent with newer fundus cameras found to provide similar image quality to their standard counterparts [3]. Forus' moderate inter-grader agreement (kappa 0.5) falls below that of other nonmydriatic cameras with good inter-grader agreement (kappa 0.64–0.77) [1–4]. This difference is likely due to the variability in detecting pathology per grader.

Advantages of Forus when compared to UWF imaging include affordable cost of $8000–$10,000 [5] compared to the average fundus camera at $20,000-$50,000 [3], convenience, portability, and ease of use in allowing non-ophthalmologists to capture images for viewing and grading by ophthalmologists.

Limitations of this study included its limited sample size, variability in graders, dilation of patients, pixilation of images, and field of view.

In conclusion, the Forus fundus camera demonstrates similar accuracy and reliability with UWF imaging in

✉ Ann-Marie Lobo
alobo2@uic.edu

1 Ophthalmology, University of Illinois at Chicago, Chicago, IL, USA

2 Ophthalmology, Wills Eye Hospital, Philadelphia, PA, USA

3 Biostatistics and Epidemiology, University of Illinois at Chicago School of Public Health, Chicago, IL, USA

4 Ophthalmology, Medical College of Wisconsin, Milwaukee, WI, USA

5 Center for Global Health, College of Medicine, University of Illinois at Chicago, Chicago, IL, USA

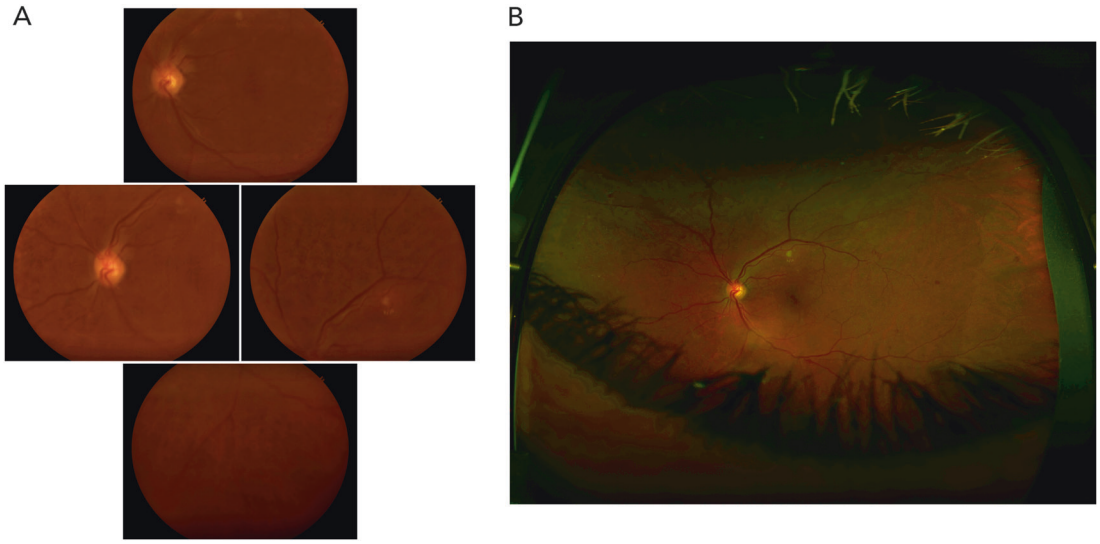

Fig. 1 Fundus images of proliferative diabetic retinopathy OS. **a** Forus. **b** Optos

Table 1 Comparison of image quality between Forus and Optos

Grader	Sensitivity (95% CI)		Specificity (95% CI)		Good (%)		Acceptable (%)		Poor (%)		χ^2 *P*-values
	Forus	UWF	Forus	UWF	Forus	UWF	Forus	UWF	Forus	UWF	
G1	85.7 (67.3, 95.9)	60.7 (40.6, 78.5)	28.6 (3.7, 70.9)	71.4 (29.0, 96.3)	14.3	2.9	40	34.2	45.7	62.9	0.152
G2	75 (55.1, 89.3)	82.1 (63.1, 93.9)	57.1 (18.4, 90.1)	57.1 (18.4, 90.1)	37.1	0	57.1	14.2	5.7	85.7	<0.0001
G3	53.6 (33.9, 72.5)	89.3 (71.8, 97.7)	42.9 (9.9, 81.6)	14.3 (3.6, 57.9)	37.1	2.9	45.7	48.5	17.1	48.5	<0.0001

detecting ocular pathology. Further data must be collected in order to validate Forus' screening capabilities for specific ocular pathologies and use in telemedicine.

Disclaimer

The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH, NSF, or RPB. The sponsors and funding organizations had no role in the design or conduct of this research.

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Compliance with ethical standards

Conflict of interest RVPC is a member of the Scientific Advisory Board for Visunex Medical Systems (Fremont, CA). The other authors declare that they have no conflict of interest.

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The use of polyethylene glycol hydrogel tissue adhesive for corneal incision closure following Descemet membrane endothelial keratoplasty (DMEK)

Morgan Fredell[1] · Marshall B. Hamill[2]

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The most frequent complication in Descemet membrane endothelial keratoplasty (DMEK) is partial or complete graft detachment of the donor material from the host cornea [1]. Maintenance of an anterior chamber gas bubble through good wound closure is critical to ensure graft adherence [1]. Currently, suturing the main incision is recommended to avoid loss of the gas bubble to minimize graft detachment [2]. While sutures are the traditional method for closing corneal incisions [3], sutureless closure is gaining popularity as closure with adhesives can result in a better watertight seal [3, 4].

For polyethylene glycol hydrogel tissue adhesive (PEG) to be successful for DMEK closure, the closed wounds must withstand the high intra-ocular pressures (IOPs) necessary for graft adherence postoperatively and after rebubbling to prevent the loss of gas and must not increase graft detachament rates, which to our knowledge, no study has investigated. This study analyzes DMEK surgeries closed with PEG to assess maintenance of wound closure immediately postoperatively and during rebubbling and to assess detachment rates to determine if PEG should be considered an alternative to sutures.

Retrospective chart review identified 48 consecutive cases of DMEK closed with PEG (ReSure® Sealant, Ocular Therapeutix, Inc., Bedford, Massachusetts, USA) performed by one surgeon between 11 May 2016 and 8 March 2017 at Cullen Eye Institute, Baylor College of Medicine. Mean age of the patients was 71.1 ± 8.5 [49.0–90.0] and 15 of the cases were combined with phacoemulsification + IOL. This study was approved by the Institutional Review Board.

Surgeries were performed according to a standard protocol, which included corneal incisions of 2.5 mm in length. The host was stripped to the same size or 1/2 mm larger than the donor with donor diameters ranging from 7.5 to 8.0 mm. Donor material was prepared by the Eye Bank and inserted via a glass pipette. The incision was closed with a single application of PEG. Then the donor scroll was unrolled utilizing the "tapping" technique [5]. At the end of the case, the anterior chamber was filled to 80% bubble by volume with 20% SF6 gas. Patients were rebubbled at the slit lamp with air injected through the inferior surgical paracentesis if graft separation of greater than 25% of the donor disc was noted at the 1-week postoperative visit.

Table 1 Intraocular Pressures post DMEK and Rebubbling

Intraocular pressures[a]	Mean (SD)	Minimum	Maximum
Intraocular pressure (mmHg) at:			
End of surgery	13.9 (4.8)	3.0	27.2
Day 1 post-op	18.2 (6.3)	8.0	37.0
Week 1 post-op ($n = 47$)	14.6 (4.2)	7.0	32.0
Immediately post rebubbling ($n = 3$)	20.3 (4.2)	17.0	25.0
Day 1 post rebubbling ($n = 6$)	12.8 (2.9)	10.0	17.0
Time from surgery to rebubbling (days)	6.2 (1.5)	5.0	8.0

Intraocular pressures were measured by Schiotz tonometry at the conclusion of the DMEK procedure and at day 1 post-op, and week 1 post-op. Intraocular pressures were measured by Tono-Pen® (Reichert Inc., Buffalo, New York, USA) immediately following the rebubbling procedure and at day 1 post rebubbling

[a]Includes only patients rebubbled at ≤8 days post-op. Two patients were excluded who were rebubbled at 20 and 28 days post-op.

✉ Marshall B. Hamill
Mhamill@bcm.edu

[1] School of Medicine, Baylor College of Medicine, 6501 Fannin, NC-200, Houston, TX 77030, USA

[2] Department of Ophthalmology, Baylor College of Medicine, 6501 Fannin, NC-200, Houston, TX 77030, USA

PEG-closed wounds withstood a maximum IOP of 27.2 mmHg immediately postoperatively and 25 mmHg immediately post rebubbling (Table 1). A water tight seal was maintained following initial surgery with only a single application of PEG and after rebubbling without further PEG application. No instance of wound failure or leakage occurred. The detachment rate was 12.5% with six eyes undergoing rebubbling.

This study contributes to the literature of sutureless closure of corneal incisions. As the PEG-closed incisions did not experience any leakage and allowed sufficient wound healing to prevent the wound reopening during rebubbling, we conclude that PEG should be considered as an alternative to sutures. This is further supported as the detachment rate in this study is less than or similar to published rates [2]. This conclusion is limited in validity due to the observational retrospective nature of the study methods.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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