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CORRESPONDENCE

Sir,
Functional and anatomical outcomes of punctoplasty with Kelly punch

Acquired punctal stenosis represents a common cause of epiphora due to partial or complete lacrimal outflow obstruction. A variety of surgical procedures have been described involving punctal dilatation or surgical enlargement, sometimes augmented with lacrimal stenting or perforated punctal plugs.

We read with interest the article by Wong *et al*[1] regarding the long-term outcomes of punch punctoplasty with Kelly Descemet's membrane punch. In this report the successful anatomical and functional rates were 94% and 92%, respectively.

The authors would like to add the results of our 86 consecutive case series of Kelly punch punctoplasty performed on 65 patients (21 bilateral cases) with symptomatic punctal stenosis. The average follow-up was 6 months. At the last follow-up, 95% (82/86) achieved anatomical success, compared to 90% (78/86) functional success rate. Three puncta (3.4%) were noted to be re-stenosed at last visit. No significant complications were recorded.

In terms of surgical technique, Wong *et al*[1] describe an extended ampullectomy up to 2–3 mm beyond the vertical component of the canaliculus, by partially de-roofing and marsupializing the lower canaliculus, aiming to counteract the postoperative scarring and contracture of the punctal opening. However, in our experience a posterior ampullectomy involving only the vertical component of the canaliculus, with two to three bites, was sufficient for achieving adequate punctal opening enlargement in majority of the cases. In cases of short or stenosed vertical component, this can be slightly extended by (~1mm). Postoperatively, patients were prescribed a topical antibiotic solely (typically g. chloramphenicol 0.5%).

Our series provides further support for punctoplasty using Kelly Descemet's membrane punch as a simple, effective, and minimally invasive procedure for patients with symptomatic punctal stenosis. Satisfactory outcomes can be achieved with minimal tissue removal, potentially with less alteration of the lacrimal pump system.

Conflict of interest

The authors declare no conflict of interest.

Reference

1 Wong ES, Li EY, Yuen HK. Long-term outcomes of punch punctoplasty with Kelly punch and review of literature. *Eye (Lond)* 2017; **31**(4): 560–565.

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Sir,
Response to 'Functional and anatomical outcomes of punctoplasty with Kelly punch'

We appreciate the interest shown by Vahdani *et al*[1] in a surgical technique we recently described[2] and their comments. We are glad to hear that this technique has been practised by fellow colleagues with similar good results achieved. We would also like to take this opportunity to address certain differences in techniques between practices.

Both series achieved high anatomical and functional success with punch punctoplasty using Kelly Descemet's membrane punch—95% anatomical success and 90% functional success compared to 94% anatomical success and 92% functional success in our series. In terms of surgical technique, compared to our methods, Vahdani *et al* described a more limited posterior ampullectomy involving only the vertical component of the canaliculus, with two to three bites. Review of literature revealed no existing reference suggesting the exact amount of tissue to be removed in punch punctoplasty. In our practice, we chose to extend the ampullectomy to 2–3 mm beyond the vertical component of the canaliculus as we believe that scarring and contraction during the healing process will eventually cause the punctal opening to become smaller. With our current technique, the extent of tissue trauma is still much less compared to the conventional 3-snip procedure, taking a balance between adequate tissue removal to prevent re-approximation of the raw cut ends of the ampulla causing failure, while limiting the destruction of the capillary action of the canaliculus to the punched out segment only. In our series, we did not encounter any major complications, but we may consider to further reduce the amount of tissue removal similar to that described by Vahdani *et al*.

Postoperatively, patients were prescribed topical antibiotics solely in Vahdani *et al* series. In our clinic, steroid and antibiotic combination eye drops are widely used, and we did not encounter steroid-related complications, given the short duration of usage. We believe the addition of steroid drops during early post-operative phase can reduce inflammation, and may theoretically slow down the scarring process and re-stenosis of the punctum.

With the presence of further evidence to support the use of punctoplasty using Kelly Descemet's membrane punch as an effective and minimally invasive treatment for symptomatic punctal stenosis, we hope its use can become more widespread in the future.

Conflict of interest

The authors declare no conflict of interest.

References

1 Vahdani K, Sian I, Giasin O, Makrygiannis G. Functional and anatomical outcomes of punctoplasty with Kelly punch. *Eye (Lond)* 2017; **31**: 1628.
2 Wong ES, Li EY, Yuen HK. Long-term outcomes of punch punctoplasty with Kelly punch and review of literature. *Eye* 2017; **31**(4): 560–565.

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Sir,
Clinical real-world results of switching treatment from ranibizumab to aflibercept in patients with diabetic macular oedema

To date, few studies have published data to assess the effects of switching anti-VEGF therapies in diabetic macular oedema (DMO).[1–3] The purpose of this study is to gain a better understanding of the clinical effects of switching treatment from ranibizumab to aflibercept, and to assess the number of aflibercept injections required to achieve complete resolution of macular oedema.

Switching to aflibercept was considered in cases of suboptimal response after treatment with a minimum of three ranibizumab injections at 4-week intervals on diagnosis of DMO. Suboptimal response was defined as decrease in central retinal thickness (CRT) by 25–75%, but with presence of persisting subretinal or intraretinal fluid. Treatment with ranibizumab was continued as needed until no improvement in CRT was noted. Eyes exhibiting increase in CRT after the first three monthly ranibizumab injections were switched to aflibercept, after the third ranibizumab injection. Responses to aflibercept were assessed at 4-week intervals until complete resolution of macular oedema was noted.

The study included a total of 49 eyes of 49 patients (15 women), with a mean age of 67.48 ± 11.4 years. The mean CRT at presentation of treatment naive patients was 537.08 ± 122.65 μm, with a mean best corrected visual acuity (BCVA) of logMAR 0.63 ± 0.29. A mean number of 6.3 ranibizumab intravitreal injections were administered in a mean period of 6 months without resolution of intraretinal and/or subretinal fluid. In these cases, treatment was switched to aflibercept injections on a per-needed basis. The duration of follow-up after initiation of aflibercept injection was 24 weeks. During this period, patients received an average of 2.58 (2–4) aflibercept injections until complete resolution of macular oedema, with complete absence of intra- or sub-retinal fluid on OCT.

At the time of switching anti-VEGF treatment, the mean CRT was 432.58 ± 163.72 μm. After 6 months with aflibercept, the mean CRT was noted to decrease to 275.83 ± 82.38 μm. As per the primary outcome of the study, a significant mean decline in retinal thickness of 156.75 μm ($P < 0.001$) was noted. The changes in mean BCVA after switching showed a statistically significant improvement from logMAR 0.71 ± 0.3 to logMAR 0.58 ± 0.18 ($P = 0.008$). These findings are demonstrated in Figure 1, which highlights the changes in CRT and BCVA, respectively at three different time points: at presentation, before switching to aflibercept (during treatment with ranibizumab), and at 6 months after treatment with aflibercept. A statistically significant correlation between BCVA and CRT at presentation (rp = 0.565) and before switching (rp = 0.565) was noted. However, there was no significant correlation between the BCVA and CRT after switching treatment (rp = − 0.138) (Figure 2). Furthermore, a significant correlation was detected

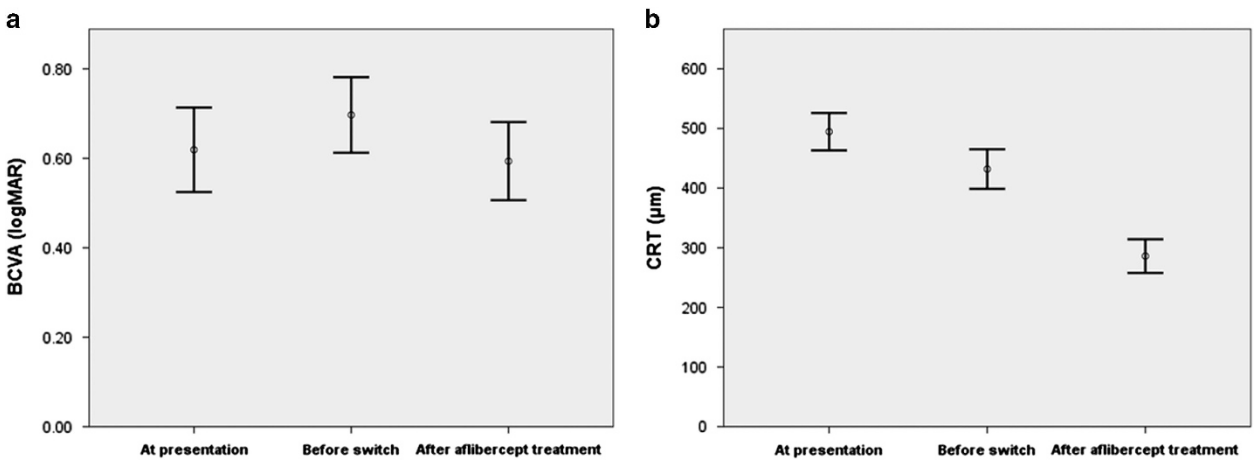

Figure 1 Change in mean BCVA (a) and CRT (b) at three time points: at presentation, before switching, and at 24 weeks after switching treatment to aflibercept. Statistically significant difference in BCVA and CRT was observed between various time points: presentation, before switching, and after switching treatment ($P = 0.008$ and $P < 0.001$, respectively).