

Peer Review File

Article information: <http://dx.doi.org/10.21037/aes-20-98>

Comment 1: In line 66, "table1" in the bracket should be deleted.

Reply 1: Thank you for your advice, I have deleted it.

Comment 2: Please check all in-text citing are consistent, such as the use of names and initials, i.e. Surname et al. (citation number). In line 88, please check Rymer BL et al. (9).

Reply 2: Thank you very much for your careful and responsible review and professional comments. I have carefully checked the consistency of all the references and modified it in the main text, marked in red.

However, **Rymer** et al. (9) mentioned that the blepharoplasty did not affect dry eye scores assessed with a questionnaire. (Pages 6, lines 91 - 92)

Comment 3: To fit all columns with appropriate width for better readership, I would suggest the author to arrange table 1 in a vertical layout.

Reply 3: As you suggested, I have changed Table 1 to a vertical layout and further optimized the width and content of the table to make it easier to read.

Comment 4: The vertical lines in table 2 should be concealed.

Reply 4: I have concealed the vertical lines in Table 2.

Comment 5: Many are known facts to oculoplastic surgeons. It is advisable to revise the overall structure of the manuscript for better flow of your points.

Reply 5: I have further modified the overall structure of the manuscript. marked in red as follows.

- In **these** articles reviewed, eyelid surgery mainly included blepharoplasty, ptosis surgery, and eyelid reconstruction. **Of these, 7 (47%) were associated with blepharoplasty, 8 (53%) with ptosis surgery, and 3 (22%) with eyelid reconstruction.** Studies were categorized based on types of eyelid surgery. (Pages 5, lines 69 - 72)
- **Incidence and ocular surface evaluation after blepharoplasty** (Pages 5, line 74)
- **Incidence and ocular surface evaluation after ptosis surgery** (Pages 6, line 99)
- **Incidence and ocular surface evaluation after eyelid reconstruction** (Pages 8, line 133)

Comment 6: The article has been written in understandable English, however not of proper English grammar. Please proofread thoroughly for every sentence to correct tenses, and the use of plurals and singulars.

Reply 6: I have proofread every sentence in the manuscript carefully and corrected the use of tenses, plural and singular. Please check the modifications I

have marked red below.

- **Further** exploration in this field may help surgeons to choose a better surgical method and give an accurate evaluation on the postoperative effect. (Page 1, lines 14-15)
- DEWS II revised **the** definition of dry eye as “a multifactorial disease of the ocular surface characterized by a loss of homeostasis of the tear film and accompanied by ocular symptoms, (Page 2, lines 30-32)
- Unfortunately, few studies **were** published to assess DES associated with eyelid surgery. **Besides**, these studies reported different and sometimes contradictory results. (Page 3, lines 37-38)
- Finally, the existed randomized controlled studies of eyelid surgery usually focus on aesthetic results rather than functional **effects**, especially in dry eye diseases. (Page 3, lines 40-42)
- PubMed database search, including the keywords “dry eye,” “eyelid,” and “surgery” was performed (for the full list of keywords, see Appendix 1). (Page 3, lines 47-48)
- Studies were eligible **for** eyelid surgery, and dry eye symptom variables were assessed before and after surgery. The **subjects were adult** patients (over 18 years of age) with no further age limit and no gender or ethnicity restrictions. (Pages 3-4, lines 50-52)
- Ocular Surface Evaluation variables **were comprised of** subjective and objective evaluation. (Page 4, lines 54-55)
- Eligible studies included randomized controlled trials, cohort studies, and case series of 10 or more participants, **excluding** case series of no more than 10 participants **and** case reports and non-English articles. In the **study screening** process, the titles and abstracts were assessed first, and then the full texts were determined to see when the study met the inclusion criteria. (Page 4, lines 59-63)
- Through the PubMed search, 209 studies were screened, of which 67 **full-text articles** were assessed **for eligibility**. (Page 4, lines 67-68)
- **As we all know, blepharoplasty can** cause postoperative dry eye disease or aggravation of preoperative dry eye complaints. (Page 5, lines 75-76)
- The authors also reported that patients with a preoperative history of DES, eyelid laxity, scleral show, or hormone therapy had a higher risk **of developing** dry eye after surgery. (Page 5, lines 82-84)
- The fluorescein staining scores reduced 30 days **postoperatively**, with no significant differences (compared to baseline) at 90 days after surgery. (Page 6, lines 92-94)
- Watanabe et al. (15, 16) mentioned that the incidence of dry eye was 5.6% and 6.9% after blepharoptosis surgery (transcutaneous levator advancement), and the tear meniscus radius significantly decreased at 1.5 months, **three** months, **six** months postoperatively ($P < 0.05$). (Page 7, lines 113-116)
- Rymer et al. (9) found no changes **for** the dry eye test (fluorescein staining,

Schirmer test, and TBUT) on 18 patients who underwent MMCR, (Page 8, lines 120-121)

- No **noticeable** difference in all the measured parameters between the operated eyes and the controlled eyes. Bautista et al. (18) observed changes in objective and subjective dry eye **tests** preoperatively and three months postoperatively in 14 patients who underwent MMCR. (Page 8, lines 125-128)
- These studies have also found that MMCR surgery increased the subjective sensation of dry eye **and** dry eye signs in various clinical tests. (Page 8, lines 131-132)
- When the defect is more than 50% of the **eyelids'** horizontal length, the Hughes or Cutler-Beard bridge flaps (29, 30) **usually suitable for reconstruction of eyelid defects**. Wang et al. (19) revealed that the McMonnies dry eye score significantly increased in the operated eyes **than** the fellow eyes. (Page 9, lines 134-138)
- The exposed ocular surface areas, upper and lower eyelid percentages, meibomian gland dropouts, and sodium fluorescein staining scores were higher in operated eyes (all $P < 0.01$). Klein et al. (20) evaluated ocular surface characteristics and tear film functions in 18 patients following modified Hughes flap for eyelid reconstruction. (Page 9, lines 140-144)
- They reported a significant loss of meibomian glands ($p < 0.001$) and more lid margin abnormalities in the upper and lower eyelids ($p < 0.001$), as well as increased fluorescein stainings of the cornea on the operated sides ($p = 0.031$) compared with the unoperated sides. (Page 9, lines 144-147)
- **This** comprehensive literature review found that the eyelid surgeries associated with dry eye disease mainly involve blepharoplasty, ptosis surgery, and eyelid reconstruction. Given the differences in the current **study results**, it is not yet clear whether patients **who** received eyelid surgery have an increased risk of dry eye disease. (Page 10, lines 157-160)
- These factors seem not to be an absolute contraindication to eyelid surgery, but early detection will help prevent or reduce dry eye disease **incidence**. (Page 10, lines 164-165)
- **Lower eyelid blepharoplasty's** primary surgical approaches include the skin-muscle flap, the skin flap, and the transconjunctival procedure. (Page 11, lines 173-175)
- However, the orbicularis oculi muscle **excision** may lead to a decreased blink rate, incomplete reflex blink, and lagophthalmos. (Page 11, lines 179-180)
- **The** degree of eyelid droopiness and the preoperative levator function determine which surgical method will be adopted. (Page 12, lines 183-184)
- The transcutaneous approach **mechanisms** may include bending of the lacrimal canal, particularly which originates from the palpebral lobe, postoperative inflammation, changes of tear flow, widened palpebral fissure, increased tear evaporation, **and** changed sensitivity of the cornea and conjunctiva(28) (Page 12, lines 187-190)

- Moreover, the surgery can **also** change the eyelids and cornea's **relative position**, thus mechanically changing the corneoscleral and conjunctival interface, aggravating dry eye disease(22) (Page 12, lines 194-196)
- **they** all have the possibility of causing or aggravating dry eye after operation. (Page 13, line 198)
- **such as** systemic diseases, medications, **etc. Ensure** the patient did not have **an** eye surgery recently, (Page 13, lines 204-205)
- **Verify** whether patients have a habit of prolonged reading(31), driving, watching electronics, smoking(32), wearing contact lenses(24), and other behaviors that exacerbate dry eye disease. **Doctors** need to know whether female patients are in their menopause, taking oral contraceptives, or receiving hormone replacement therapy(33, 34). (Page 13, lines 206-210)
- For patients with dry eye disease or dry eye risk factors, surgeons should carefully decide whether to **operate** according to the degree of symptoms and risks. (Page 14, lines 215-217)
- Follow **the** principle of conservative skin excision during the operation. When operating on the upper lid, leave 8-9 mm skin in **the** pretarsal fold using a caliper, and the upper skin from the lower margin of the brow to the lid margin must be retained at least 20 mm (38). (Page 14, lines 224-227)
- Generally, lagophthalmos do not occur after surgery, even **if** edema should be less than 2 mm (6). (Page 15, lines 229-230)
- Kiang et al. (41) found that muscle-sparing upper blepharoplasty produced similar aesthetic outcomes as conventional blepharoplasty, while significantly reducing dry eye disease **complications**. (Page 15, lines 237-239)
- Depending on the patient's lower eyelid morphology, concurrent midface-lifting, or fat augmentation can prevent the lower **eyelids' complications** and further reduce the likelihood of dry eye disease(45). (Page 16, lines 250-252)
- **It is recommended** for patients with both ptosis and lower lid malposition to have lower lid surgery first and then MMCR surgery. (Page 16, lines 254-255)
- In eyelid reconstruction, **the flap's** shrinkage and contraction may affect the lower eyelid function and lead to eye exposure and irritation. It is recommended to leave a more substantial portion covering **2-3** mm of the lower part of the cornea on the flap division(21). (Pages 16-17, lines 256-259)
- Literature(47) reported that about 60% of patients undergoing blepharoplasty had lacrimal gland prolapse, especially those **who** experienced multiple eyelid surgeries. As **the** lacrimal gland prolapsed, we advocated resuspending it to the periosteum along the superolateral orbital **rim's inner aspect**(38). (Page 17, lines 261-264)
- If this result **from** overzealous resection of eyelid skin during surgery, skin grafts may be required(52). (Page 18, lines 276-277)

- **Moreover**, if so, it can be corrected by canthoplasty or reduction(50, 53). (Page 18, lines 279-280)
- **Comparing** of the effect of different surgical approaches on the ocular surface and tear film needs further research. Moreover, the ocular surface evaluation **methods** in the previous studies mainly focused on the Schirmer test, tear film breakup time, and other traditional examinations. (Page 18, lines 286-289)
- Preoperative assessment of risk factors, intraoperative and postoperative management, and appropriate surgical methods can reduce dry eye disease **incidence** after eyelid surgery. For this reason, we advised **using** an algorithm (Figure2) perioperatively, which may help to reduce the incidence of chronic dry eye syndrome. **The algorithm** can improve our overall understanding of dry eye syndrome, select the best surgical method, improve patient compliance, and ultimately improve the prognosis. (Page 19, lines 293-299)