Reviewer's report

Title: Two or more dexamethasone intravitreal implants in treatment-naive patients with macular edema due to retinal vein occlusion: subgroup analysis of a retrospective chart review study

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Reviewer: Yuksel Totan

Reviewer's report:

INTRODUCTION

The authors say “Treatment of newly diagnosed RVO with a long-acting implant has potential to effectively treat edema and restore vision without a need for frequent intravitreal injections.”

Please write clearly “intravitreal injection of anti-VEGF or DEX implant?”

METHODS

The authors say “If both eyes were eligible for the study, the eye that had received the largest number of DEX implants was designated as the study eye.”

Q1. Please explain why? Because, this is not a comparative study and both eyes can be included in such a retrospective study since the data from both eyes can not interfere to each other and thus can not be considered as a misleading.

The authors say “Data were collected from patient records from the time of the first DEX implant (baseline) through at least 3 months and up to 6 months after the last DEX implant.”

Q2. Please explain why the cases with 3 months follow-up after the last DEX implant were included in the study since only 15 cases were received 3 DEX implant and the majority of 39 study patients (24 patients) received only 2 Dex implant. Therefore, the readers would like to know “how many cases with 2 Dex implant were followed up for just 3 months”.

Q3. According to the OCT, what are the quantitative criteria for the treatment response and/or for the next DEX implant or anti-VEGF injection instead in a patient unresponsive to previous DEX implant or anti-VEGF therapy? Regarding to the quantitative OCT criteria, is there any difference between the study centers included in the study.

Q4. Is there any difference regarding the OCT devices between the study centers? If so, how could the authors solve the problem of CMT measurement differences between the OCT machines since CMT measurement is not interchangeable between the different OCT devices and so, this is a big conflict particularly for statistical analysis?
Q5. There is no information given about FFA in both method and result sections. Did the patients have FFA examination at baseline or at any visit during the study? If so, please explain the FFA criteria for switching between the DEX implant and anti-VEGF treatments if existed in the study protocol. If FFA were not performed, please explain why?

RESULTS

Treatment

The authors say “Follow-up data after the first DEX implant in treatment-naïve patients were collected for a mean of 13.9 months (standard deviation [SD], 4.6).”

Q6. Please specify the range of values (min-max values).

The authors say “The mean number of DEX implants received during the study period was 2.9 (SD, 1.4; range 2–8) and the mean time between DEX implants, calculated per patient, was 177 (SD, 68) days.”

Q7. What is the range of values?.

The authors say “…and for the 23 patients who received anti-VEGF treatment as well as DEX implant, the anti-VEGF treatment was given at a mean of 3.1 months after the most recent DEX implant.”

Q8. What is the mean time (range?) between DEX implants in this subset of the study patients?. Considering the majority of patients (34 of 39 cases) received only 2 Dex implants and 23 of them also received an average of 3 anti-VEGF injection during the study period, please explain if anti-VEGF treatment was administered only after completion of DEX implant therapy or given between DEX implant injections in some or all cases. Please also explain the follow-up period (in months) after the first DEX implant in this subset of patients.

The authors say “The mean (SD) total number of intravitreal injections (DEX implant plus anti-VEGF) received by treatment-naïve patients during the study period was 4.8 (2.2)”

Q9. What is the range of values?.

Q10. Regarding DEX implant injection number and number of treatment-naïve patients, there is an apparent controversy both between the tables and figures and between the text and figures. Please correct all the differences (mistakes) throughout the manuscript, otherwise please explain the underlying causes of this difference along with making necessary modifications accordingly to present the same numbers.

Safety analysis

The authors say “12 (30.8%) treatment-naïve patients had an increase in IOP
from baseline of at least 10 mm Hg at one or more measurements (Table 3), and IOP lowering medication was used as a consequence of the retina treatment in 30.8% of treatment-naïve patients.”

Q11. Please explain the mean or average DEX implant injection number after which the majority of 12 treatment-naïve patients had an increase in IOP from baseline of at least 10 mm Hg.

The authors say “among the 23 phakic eyes at baseline, 5 (21.7%) had cataract surgery during the study period.”

Q12. Please explain the average period of time after the first Dex implant when cataract surgery performed or planned.

DISCUSSION
The authors say “This study has the limitations…”

This paragraph should be extended with additional limitations including the criticisms raised in the method section above (i.e., Q3-Q5 in the methods section).

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
"I declare that I have no competing interests"