Author’s response to reviews

Title: LONG-TERM VISUAL OUTCOMES AND REHABILITATION IN USHER SYNDROME TYPE II AFTER RETINAL IMPLANT ARGUS II.

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RESPONSE TO THE COMMENTS

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LONG-TERM VISUAL OUTCOMES AND REHABILITATION IN USHER SYNDROME TYPE II AFTER RETINAL IMPLANT ARGUS II.

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BMC Ophthalmology

We would like to thank the reviewers for their advices and support. We believe that with their comments the quality of the article improves. All changes to the manuscript are indicated in the text by highlighting a response right after the questions of the reviewers(in blue) and in the manuscript in yellow. This is included in a cover letter in the attach files.
Editor Comments:

As reviewers requested, please describe more details about the rehabilitation process and post-op results at case presentation part. Thank you.

Response:

More details about the rehabilitation and post-op results are included in the manuscript, as it is mention in the comments below.

Reviewer reports:

Reviewer 1: Jeroni et al. reported a successful implantation and rehabilitation case of ARGUS II prosthesis in Usher type II patient. Although this is the first report, some issue should be addressed before publication.

1. Main problem of Argus II implantation in deaf patients might be that the patients cannot use auditory cue during their rehabilitation. The authors should more describe on the different points of rehabilitation process of this patient from other typical RP patients. What was the role of interpreter during the rehabilitation?

Response:

We agree with this comment, modifications have been introduced in the text.
The role of the interpreter is to serve as an interlocutor between patient and visual training technicians, in order to provide objective information about the physical environment, as well as being a mobility assistant.

2. Page 4 line 40-42, "We noted that he had a high intellectual capacity" seems to be somewhat subjective expression without any objective validation.

Response:

We agree with this comment. Since we have not any objective validation of our patient’s intellectual capacity, modifications have been changed in the text.

3. Page 5, line 10-14, please be more specific for the basic phase. Was the patient trained using the Instructional kit provided by Second Sight or other similar tools?

Response:

In the basic phase the patient is trained in different sessions using an instructional kit provided by Second Sight training technicians. These sessions aim to teach patients to interpret and use new visual information to develop skills in their daily lives. Modifications have been included in the manuscript.

4. Page 5 Line 9-11, some expression is duplicated.

Response: We do not see any duplicated expression, this are the lines 9-11:
“The patient was in a controlled environment with elements of high contrast and had to adapt to using head movements to obtain vision and sensitize a grey scale.”

Reviewer 2: Authors described a very interesting case with photos as well as a video.

This case is unique in terms of deaf as well as blind patient.

To make this case report more interesting, however, I would like to recommend a few points.

1. Because Argus II surgery is not a frequently-conducted surgery, it will be better for the authors to add post-op ocular images, including fundus photo and OCT, at the end of follow-up period. Also, any post-op complication need to be addressed, if not major.

Response: Pictures of the pre and post op retinography and OCT have been introduced in the manuscript. Legends for the figures have been added at the end of the text.

2. Authors should describe results in more detail at Case presentation Part. In this manuscript, authors described more general principles of rehabilitation procedure. Instead, they should describe how large letter he read at what distance, and what is his visual field angle, etc.

Response:

We already described how large are the letters that the patient reads:

“He read letters with high contrast over 6 cm and words up to 4 letters”, however we did not specify postop visual field angle (15°), and distance: up to 30-40 cms. Modifications have been made such as more complete description of basic (detect light, locate or identify objects find utensils on a table, separate white and colored clothes to wash), and orientation and mobility phase (an Locate parked or moving cars, locate bus stops and flagpoles, find doors, windows and elevators, follow a path or a sidewalk, crossing a pedestrian, locate a light on the ceiling of an entrance, a window through which light enters, etc.
3. Their description of the post-op results should be moved to Case Presentation from Discussion. Also, it will be better to choose a better video, showing that the patient is not using excessive hand contact. In the video, the patient seemed to use hand contact all the time.

Response:

We agree with the first comment, we have moved post-op results to Case Presentations.

However we disagree with the second comment. Sign language in Usher syndrome necessarily entails the realization of a series of adaptations that modify this form of communication so that it is easier to perceive by the deaf blind person through its visual channel: adequate illumination, distance and position to see the hands of the interpreter.

When visual channel and visual acuity suffer a greater deterioration (as in our patient case), the patient is not able to continue perceiving the sign language in the same conditions, and they will need to constantly touch (with both hands most of the time) the hands of the interpreter.

In our video you can see that the patient has no need to continually touch with his hands the interpreter’s hands. Besides, in our text when we say “activities without the need to use excessive hand contact”…

…”The patient performs daily activities without the need to use excessive hand contact. He can now distinguish the hand movements of his interpreter with increasing fluency whenever they are within his visual field (Video 1)”…

…”We are referring to the daily activities hand contact, not saying that he did not need to touch his interpreter hands anymore. Therefore we believe this video is a correct sample of our patient communication after the surgery.
4. Authors described that this patient was good in O&M in normal surroundings with referencing Figure 1 and Figure 2, but those figures do not seem to show the improvement in O&M. It will be better to add a video, which may show his movement in normal surroundings.

Response: Our patient agreed to take pictures in normal surroundings (like Figure 1 and figure 2), however he did not consent for videos taken outside in the streets.

We apologize for this inconvenient, we would be thrilled to have more material, but we believe it is not essential for the clinical case presentation.