



Long-term evaluation of Retinitis Pigmentosa (RP) patients implanted with a novel epiretinal prosthetic device.

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Topic: RETINA
Retina Subspecialty Day Late Breaking Developments

Abstract Body:

Purpose: To evaluate the safety of the implantation procedure, the long term presence of the NR600 system and the system's performance in vision restoration in RP patients. **Methods:** End stage RP patients were implanted unilaterally as part of an ongoing prospective multi-center study. A unique anchoring mechanism in the ciliary sulcus was used to position the implant with penetrating electrodes epiretinally. **Results:** Five patients were implanted to date and all tolerated the procedure well, demonstrating good and fast recovery. Adverse events included mild corneal edema, elevation in intra-ocular pressure and mild scleritis, all responsive to medication and transient. With ultra-low current thresholds of 0.15 nC/cm², patients demonstrated orientation and mobility skills such as walking a line and locating obstacles, could identify figures and objects, follow movement, as well as discriminate between two adjacent shapes. **Conclusion:** Retinal activation by penetrating electrodes with very low currents produced functional visual capabilities in blind retinal degeneration patients, in a procedure that has been shown to be safe in over a year's follow up.

Course Format: Limit my abstract to:

Financial Interest: Yes

Industry Employed: No

Background Statement: This report describes the preliminary safety and performance achievements of the first human implantations of a novel epiretinal prosthetic system with penetrating electrodes and a designated anchoring device, from over a year-long perspective.

Outline/Attachment: AAO abstract_outline.pdf

Authors

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