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Experimental CNV in Cynomologous Monkey after Sustained Release of VEGF & bFGF within the Suprachoroidal Space: Part 2 History

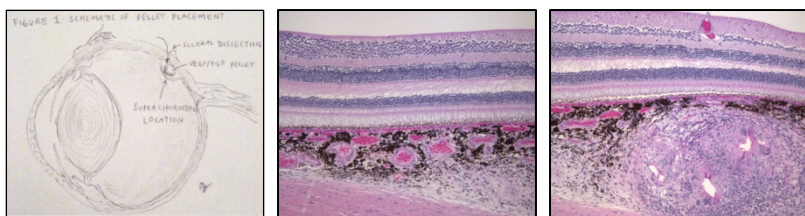
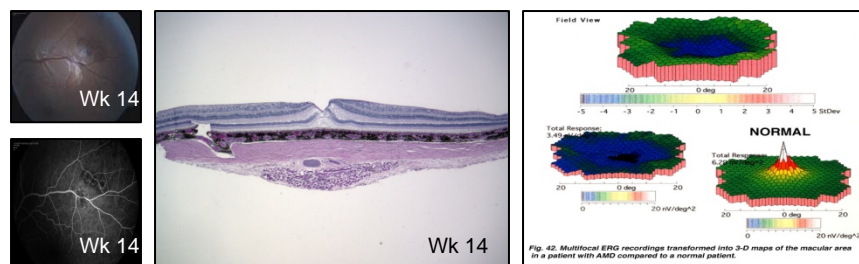
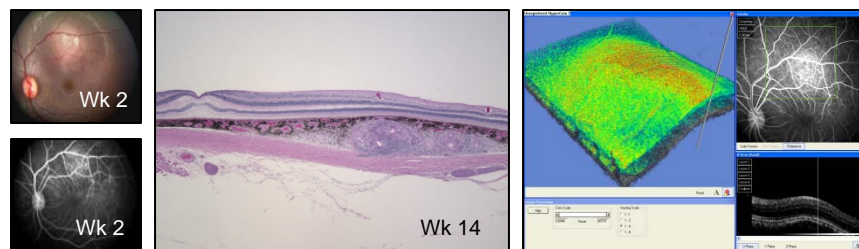
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Purpose: The goal of this study was to follow the natural history of experimental monkey CNV after suprachoroidal sustained release of both VEGF and bFGF.

Methods: In this pilot monkey study (N = 5), either non-biodegradable placebos or VEGF/bFGF implants that are shown to produce rabbit progressive CNV after *suprachoroidal* implantation (Zahn et al.), was used. One monkey eye (OS) initially was implanted with the VEGF/bFGF pellet to establish the procedure and define preliminary histology. In the other monkeys (N = 4) subsequent implants, 1x or 2x VEGF/bFGF in the OD eyes or placebo in the OS eyes, were placed suprachoroidally, within 2 disc diameters of the macula. One day post implant, with a Krypton-red laser, 3 spots were placed on retinas next to each pellet. For 14 wks, all monkeys were anesthetized and monitored with color fundus photography, FA, multifocal ERG and spectral domain OCT. At either wk 7 or wk 14, eyes were enucleated and then placed in neutral buffered formalin for several days. Areas containing the macula, laser burns, and VEGF/bFGF implants were processed and then stained with hematoxylin and eosin.

Results: Fluorescein leakage was seen by laser spots & above VEGF/bFGF implants in all eyes up to wk 14. Fluorescein leakage was not observed in placebo-implanted eyes (bottom slides). Dilated blood vessels by VEGF/bFGF implants can be seen in the choroidal layer. Laser burns had severe disruption of retina and choroid. Normal-appearing maculas were found in all OS eyes (second sets of FAs Wk 1 through 14). Mf ERGs provide clear evidence of reduced amplitude in this study (bottom right).

Conclusion: Experimental intra-CNV can be induced in the non-human primate eye through a VEGF/bFGF implant within the suprachoroidal space.



Figures (left to right): Suprachoroidal implantation of the VEGF/bFGF pellet is shown. H & E stained slides at 100X demonstrate the VEGF/bFGF implant suprachoroidally above the macula.

