

عنوان مقاله:

A glance at molecular therapy of Glaucoma

محل انتشار:

اولین کنگره پژوهشی دانشجویان دانشگاه علوم پزشکی هرمزگان (سال: 1398)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Samira Nafar - *Master of Human genetics, Shiraz University of Medical Science, Shiraz, Iran*

Maedeh Alipour - *Master of Hematology, Shiraz University of Medical Science, Shiraz, Iran*

خلاصه مقاله:

Background and Objective: Glaucoma is a neurodegenerative disease that with increased pressure of fluid within the eye damage to retinal ganglion cells (RGCs) – responsible for making up optic nerves and transfer of data from eye to brain _that make death of RGCs and if left untreated leads loss of vision and finally blindness. It doesn't have any certain cure, but something like hypotensive drops, laser therapy and surgical can slow the progress of the disease . Another one is use of stem cells that can be a good way, but recently use of exosome derived stem cells instead of whole cells has been noticeable in the treatment of glaucoma and regeneration of RGCs for reasons such as performing inter cellular signaling, ability to be purified and stored, easy and targeted fusion into cells, their precise dosage, besides to lack of immune response and uncontrolled growth. Use of these vesicles as eye drop doesn't side effect of chemical drops such as redness, itchy and dryness. Exosomes _membrane bound vesicles with maximum diameter 150 nm released by cells_ contain different proteins, lipids, miRNAs and etc. knockdown of Argonaute-2 (Ago-2) as a main miRNA effector protein revealed that effect of these small vesicles were due to miRNAs which there are more than 2000 type of them. They cause stop or change genes expression. In this disease alteration of expression of some miRNAs has led to the attention of these oligonucleotides as part of the therapeutic part of the use of stem cells. **Search Method:** The resource of this study are from various databases such as Google Scholar, PubMed, Web of Science and Update databases. **Findings:** Expression changes compared to normal cases examined in animal models and sample of patients with glaucoma including decreased expression of miR-181c, miR-497, miR-204, let-7a, miR-29b, miR-16, miR106b, miR-25 and increased expression of miR-141, miR-200a, miR-200b, miR-200c and miR-429. miR-27a. Regarding these facts, miRNAs remain a promising tool in glaucoma therapy. So, the exosome as a carrier of these oligoes have lots of special effect. miRNAs that are most abundant in stem cell derived exosomes include: miR-106b, miR-1246, miR-4488, miR-4508, miR-4492, miR-4516, miR-191, miR-222, miR-21, let-7, miR-6087 which though their protein targets apply effect on regulation of cell growth, apoptosis, angiogenesis and differentiation and result in improvement and regeneration of optic nerve. As some example: miR-17-92 and miR-21 ... regulate PTEN expression, mir-146a regulate epidermal growth factor (EGFR), let-7 targets Dicer, miR- 191 reg

کلمات کلیدی:

Glaucoma, Stem cell, Exosome, miRNAs

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/996291>



