



International Journal of Aesthetic Medicine and Health (DOI:10.28933/IJAMH)



Utilization stem cells and antiangiogenic treatment of age-related macular degeneration (AMD)

Silva, V.M¹, Santos, G.S², Silva, J.F.S³, Santos, G.M⁴, Wanderley, M.C.A⁵, Godone, R.L.N⁶

1,2,3,4 Student of Biomedicine Course - UNINASSAU- Caruaru;

5, 6 Professor in Biomedicine Course - UNINASSAU- Caruaru.

ABSTRACT

Introduction: Age-related macular degeneration (AMD) is an increasingly common pathology due to the general aging of the population, and has assumed the dimension of a true public health problem. Currently, the applications of cellular therapies are viable in the repair of the corneous tissue. Angiogenesis inhibitors, however, are a class of drugs most commonly used to block the proliferation of new blood vessels. Advances in the study with stem cells and antiangiogenic have provided expectations in the scientific community, as to its use in regeneration of tissues damaged by degenerative diseases. **Objective:** To relate the advances in research on AMD with the use stem cells and antiangiogenic as an effective treatment for this pathology. **Methodology:** Electronic data platforms (MEDLINE, PubMed, Scopus) were consulted from 2011 to 2016, using descriptors: "stem cells", "macular degeneration", "AMD" and "antiangiogenic". **Results and Discussion:** Clinical studies in adult rats showed that stem cells derived from bone marrow applied to the ocular tissue, activated neurological cells called astrocytes, contributed to the regeneration of this tissue due to trauma. The results correlating antiangiogenic as Bevacizumab were included by ANVISA (Agência Nacional de Vigilância Sanitária) in 2011. Therefore, due to its inhibitory effect of angiogenesis, it has been used in ophthalmologic degenerative diseases such as AMD. The regeneration of ocular tissues, through therapy with stem cells presents problems to be solved, by the different types of embryonic tissues. This differentiation should establish criteria for the best choice of the origin of stem cells. Bevacizumab has been used in the treatment of this disease by intravitreal injections directly into the eye, but repeated intraocular injections can cause serious complications. **Conclusion:** Despite the need for further studies, the use of these therapies for regeneration and repair of injured ocular tissues has presented excellent advances in the field of ophthalmology.

Keywords: Age-related macular degeneration; Cell therapy; Inhibitors of angiogenesis

*Correspondence to Author:

Silva, V.M

Biomedicine Course - UNINASSAU

How to cite this article:

Silva, V.M, Santos, G.S, Silva, J.F.S, Santos, G.M, Wanderley, M.C.A, Godone, R.L.N. Utilization stem cells and antiangiogenic treatment of age-related macular degeneration (AMD). International Journal of Aesthetic Medicine and Health, 2018, 1:1

 **eSciPub**
eSciPub LLC, Houston, TX USA.
Website: <http://escipub.com/>