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STEM CELL THERAPHY FOR CANCER

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ABSTRACT

Stem cells are commonly produced from bone marrow. These bone marrow contain various types of cells like t-cells, B-cells, interferons etc. these cells developing the immune system. Main responsible for immunr system is t-cells which attack antigens. Which is responsible for CMI (cell mediated immunity) which attack any cancer cells, then produce the macrophages, these macrophages target and blasting cancerous cells. mechanism of t-cells adhere to cancerous cell surface bind to the cell membarane and vulnerably damage the cancerous cells. cancer like leukemia, lymphoma, myeloma other cancercells etc. when stem cell are injected through vein enter in to the blood sream immediately attack, the mechanism like apoptosis and phagocytosis process involved. This method is very advantages than chemotheraphy, in chemotheraphy directly treatement with chemical and radiation theraphy from this method bone marrow cells also killed. So stem cell theraphy is very crucial in future. every disease targeted with stem cell theraphy in coming soon days.

KEYWORDS: stemcells, t- cells, b-cells, apoptosis, chemotheraphy.

INTRODUCTION

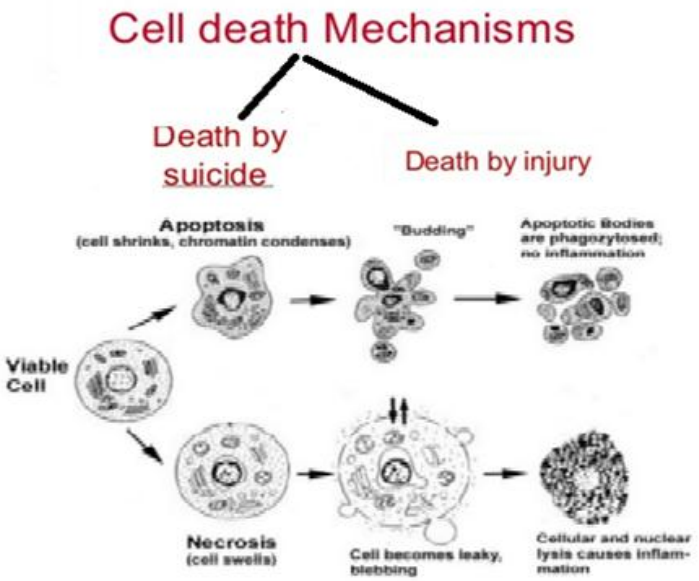
Stem cells also called as master cell. stem cells are produced from blood cells in the bone marrow that develops in to red blood cells, white blood cells and platelets. Stemm cells are un differentiated biological cells. which can differentiate in to specialized cells in multi cellular organism[1] there are two broad types of stem cells: embryonic stem cells, which are isolated from the inner cell mass of blastocysts and adult stem cells, which are found in various tissues. Adult syem cells are used in medical therapies for example in bone marrow

transplantation means directly bood injected in to blood stream. stem cells generated through somatic cell nuclear transfer or dedifferentiation have also been proposed as promising candidates for future therapies. A human embryonic stem cell is also defined by the expression of several transcription factors and cell surface proteins.[2] Pluripotent adult stem cells are rare and generally small in number, but they can be found in umbilical cord blood and other tissues.[3] Bone marrow is a rich source of adult stem cells, which have been used in treating several conditions including spinal cord injury.[4,5] etc.

Mechanism of stem cell theraphy

stem cells are class of un differentiated cells that are able differentiate into specialized cell types which are embryonic stem cells and adult stem cells. Stem cells basically worked on apoptosis mechanism mean programmed cell death nothing but continuously worked on cancerous cell. Apoptosis is an active, strictly regulated and energy dependent cell death process. in mammalian cells apoptosis is regulated via two different pathways. one is the extrinsic and another is intrinsic pathways[6,7,8,9] in apoptosis cell continuously on cascading mechanism. cell to cell triggered by cascading process. celles are serially dead by apoptosis method. in which cell shrinkage and chromatin condensation occur means viable cell are completely damaged.

Programmed Cell Death Mechanism(Apoptosis)



RESULTS AND CONCLUSION

In stem cell theraphy main important criteria is major role of t-cells, B-cells and interferons are responsible for the immune system as well as cancer cell death by stem cell transmission injected to vein enter into the blood stream and based apoptosis mechanism and cascading mechanism are responsible for the cancerous cell death. in this method chromatins (bundle of DNA fiber) are condensed and shrtinkage occur.

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