

Tumor & Cancer Immunology and Immunotherapy

July 28-30, 2016 Melbourne, Australia

The role of immunotherapy for stem cell cancer

Purwati Armand

Universitas Airlangga, Indonesia

Aim: The role of immunotherapy for stem cell cancer.

Method: Types of cancer are Carcinoma: Cancer of endo or ectoderm e.g., skin or epithelial lining of organs, Sarcomas: Cancer of mesoderm e.g., bone, Leukemias and Lymphomas: Cancers of hematopoietic cells. Molecular basis of cancer are dividing into three: The first is mutation was caused by radiation, chemicals and viruses; the second is up regulation of the proto oncogens and the third is down regulation of tumor suppressor genes. Cancer growth from cancer of stem cell with modality treatment of cancer was surgery, radiation, chemotherapy, Cryotherapy, radiofrequency, PBMCT, BMCT, until immunotherapy. Treatment modality was chosen depending on staging of cancer, but cancer of stem cell was known to resistance with conventional treatment, so for eliminated that the newest issue with immunotherapy. And also patients with metastasis staging of cancer usually also refracted with conventional treatment. So stem cell transplantation combination with immunotherapy will promise to give solution for that problem.

Result: Haematopetic stem cell transplantation (HSCT) is a procedure to restoration bone marrow function as the result of giving cytotoxic drugs with or without whole body radiation. Source of stem cell from peripheral blood (PBMCs) or bone marrow or umbilical cord blood (UMCB) is autologous or allogenic.

Conclusion: Stem cell combination with immunotherapy process was given separate or together, immunotherapy with NK cell or DCs autologous or allogenic. *In vitro* co culture between NK cell and leukemia cell, this cell could reduce the leukemia cell population, and also used in animal trial. Clinical trial on patient with solid tumor were treatment with immunotherapy with NK cell with the result of reducing of tumor size, with the reason because of NK cell have specific receptor as anti tumor, and also if given together with allogenic could prevent or decreasing rejection HSCT because of the unique properties of NK cell.

Biography

Purwati has finished her general practitioner from Airlangga University in 1997, she has also completed her internal med. Specialist in 2008 from Airlangga University and taken Doctoral program in Airlangga University 2010-2012. Her research Interest lies in stem cell field. She was secretary of stem cell laboratory of Airlangga University and also secretary of Surabaya Regenerative Medicine Centre in 2008. In 2015 she became the chairman of stem cell research and development centre Universitas Airlangga Surabaya, Indonesia. She has almost 50 publications in journals, papers, and seminar.

purwatipanpan@yahoo.com

Notes: