e-ISSN: 2319-9865
p-ISSN: 2322-0104

Research and Reviews: Journal of Medical and Health Sciences

Genetics in Leukemia

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Short Commentary

Received: 17/03/2015
Accepted: 21/04/2015
Published: 28/04/2015

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ABSTRACT

The changes that are brought nowadays in the advanced molecular methods, such as Gene Expression , Dna and RNA and the gene sequencing helps in determining the abnormalities in the patients suffering wih Acute Myeloid leukemia. Nowadays here are some more molecular and novel techniques for identification of AML by using different Assays.

Short Commentary

Acute myeloid leukemia [1,2] is a type of cancer that occurs to the bone marrow. Bone marrow is the blood forming tissue in the body. Bone marrow helps in the production of Red blood cells or the Erythrocytes. These blood cells helps in the carrying oxygen to different parts of the body. Bone marrow also helps in production of White blood cells, platelets.

White blood cells or leukocytes acts as scavengers for the body and the platelets or the thrombocytes involves in clotting of blood.

Patients with Acute myeloid leukemia are very sensitive. They develop patches and small marks on the skin. Bleeding from the nose and gums are the symtoms of Leukemia. Once the Bonemarrow gets effetced with this leukemia, RBC, leukocytes, Thrombocytes [3,4] gets effected. Once a bruise occurs, bleeding occurs continiously for a long period of time. Lekumeia causes the production of Cancer ceels in the bone marrow which causes excess bleeding.

Genetic disorders [5,6] are also one of the risk factors for the development if Myeloid leukemia. For example, Downs syndrome is one of the gentic disorders which is assoiciated with the increased risk of Myeloid leukemia.

A gene called PAX5 is one which plays a vital role in development of cancer cells which effects the Bone marrow. Due to inheritance, this PAX5 gene undrgoes several mutation and hence causes cancer in the Bone marrow. B cells are one of the cancer cells which are developed by the PAX5 gene which is difference in thie genetic inheritance [7,8]. The inherited genes without these gene PAX5 doesn't have the chance of acquring this Leukemia. But researchers have concluded that, still many factrs are effecting the deveoloment of Myeloid leukemia.

Acute myeloid leukemia is mostly familiar with CEBPA gene whic cause inheritance in the families with Leukemia. This CEBPA gene [9,10] is present in every cell in the body, and the mutation occurs regularly and the inheritance continious in th next generation families.

Rapid Mutations [11] or the chenges in the RNA is found in large cases of leukemia. Changes in the Chromosome also occurs due to the changes or mutations in the gene. Changes in DNA doesn't make a big difference in the chromosomal sequence.

There are different types of Leukemia which are caused due to changes in the level of Mutations. Research is still going on about the changes in Chromosomes [12] and the effect of changes in chromosomes on Leukemia.

Some cancers can be treated with help of Chemotherapy but, all types of leukemia's will not respond to Chemotherapy.

Over the past, much data was collected regarding the Myeloid leukemia [13], However there is much study left in terms of treatment of Leukemia. Many clinical trails are still going on by taking many patients as reference and many tests are being conducted on the patients[14-28] .

However discoveries related to diffrent types of Leukemia have been under process with the help of mi RNA. The experimental details or results may give better results for the treatment of myeloid leukemia [29-31].

CONCLUSION

Lymphoblastic leukemia (ALL) remains standout amongst the most difficult grown-up malignancies, particularly concerning treatmentlike Immunophenotyping, cytogenetic-atomic studies . Notwithstanding, the vast majority of the studies concentrated on youngsters and consequently a profound atomic portrayal of grown-ups is as yet difficult, particularly for those cases lacking high-hazard markers. In this study, we have assessed the prognostic importance of Gentics in Acute myeloid Leukemia.

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