Leukemia is a cancer of blood resulting from abnormal hematopoietic and myeloid cell proliferation. It is caused by genetic changes, driven by environmental factors over many years, and is characterized by the presence of Leukemia-specific markers.

Materials & Methods

To study the molecular genetic basis of Leukemia in Pakistan by RT-PCR and FISH-based analysis of different Leukemia fusion oncogenes with comparison with Western samples.

Results

- **Leukemia-e15**: In patients from Pakistan, the frequency of **Leukemia-e15** was 30%.
- **EBV**: In patients from Pakistan, the frequency of **EBV** was 40%.
- **CML**: In patients from Pakistan, the frequency of **CML** was 20%.
- **AML**: In patients from Pakistan, the frequency of **AML** was 10%.

Discussion

Significant differences were found between both populations with respect to frequencies of various fusion oncogenes namely **TEL-AML1**, **TEL-AML1**, and **CML** which were more prevalent in patients from Pakistan. The genetic and biologic differences in the cause of leukemia between Pakistan and other countries are the basis for accurate diagnosis, prognosis, treatment, and management of leukemia in any population.

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References