

Extreme leukocytosis in a healthy young man and use of polymerase chain reaction for detection of BCR-ABL

Sir,

Dear Editor, chronic myeloid leukemia (CML) is a common myeloproliferative disorder seen in adult. The difficulty in diagnosis of the case is usually in case without overt blood picture finding. Here, the authors report a case of young male (24 years) who had routine blood examination before starting a job. His complete blood count was within normal limit except for an extremely high white blood count (more than 30,000). The blood smear examination showed leukocytosis without observation of abnormal blast cell. The immunological flow cytometry test result was negative. The patient was to have further diagnosis. The patient denied for bone marrow aspiration for cytological study selected to have an alternative peripheral blood test for real-time quantitative polymerase chain reaction (RQ-PCR) for BCR-ABL, and the result showed positive result. This case was finally diagnosed to have CML and the patient received oral nilotinib treatment. The repeated examination at 6 months showed major molecular response. The patient was still alive at present (2018, 5 years after the first diagnosis). This case is an example of early diagnosis of a CML case in healthy patient with the use of the new RQ-PCR test for BCR-ABL, which is considered the most available sensitive test at present.^[1,2] The test might be considered as a tool for additional screening for any case of unexplained asymptomatic extreme leukocytosis in asymptomatic healthy population. In fact, the use of the

new molecular technique becomes the new useful test in oncohematology that can increase the chance of early diagnosis and reduce the unnecessary invasive harmful medical procedure to the patient. The other good example is the JAK2 test that can help diagnosis of polycythemia.^[3] In our countries, where the situation is still a developing country, the great concern for further management is the cost of the test. How to reduce the cost of the test to increase the affordability of the test to support the patient is the future goal.

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References

1. Yu S, Cui M, He X, Jing R, Wang H. A review of the challenge in measuring and standardizing BCR-ABL1. *Clin Chem Lab Med* 2017;55:1465-73.
2. Yeung DT, Parker WT, Branford S. Molecular methods in diagnosis and monitoring of haematological malignancies. *Pathology* 2011;43:566-79.
3. Vannucchi AM, Guglielmelli P, Tefferi A. Polycythemia vera and essential thrombocythemia: Algorithmic approach. *Curr Opin Hematol* 2018;25:112-9.

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