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DOI: 10.21767/2386-5180-C1-003**FREQUENCY OF BCR-ABL FUSION TRANSCRIPT TYPES WITH CHRONIC MYELOID LEUKEMIA BY MULTIPLEX PCR IN SRINAGARIND HOSPITAL, KHON KAEN THAILAND****Kanokon Chaicom¹, Chitima Sirijerachai¹, Kanchana Chansung¹, Pinsuda Klangsang¹ Boonpeng Palaeng¹, Prajuab Chaimanee² and Pimjai Ananta²**¹Khon Kaen University, Thailand²Central Laboratory Srinagarind Hospital, Thailand

Chronic myeloid leukemia (CML) is characterized by the consistent involvement of the Philadelphia chromosome (Ph), which is derived from a reciprocal translocation between chromosome 9 and 22, the main product of the t (9;22) (q34; q11) translocation, is found in the leukemic clone of at least 95% of CML patients. There are two major forms of the BCR/ABL fusion gene, involving ABL exon 2, but including different exons of BCR gene. The transcripts b2a2 (e13a2) or b3a2 (e14a2) code for a p210 protein. Another fusion gene leads to the expression of an e1a2 transcript, which codes for a p190 protein. Other less common fusion genes are b3a3 or b2a3, which codes for a p203 protein and e19a2 (c3a2) transcript, which codes for a p230 protein. Its frequency varies in different populations. In this study we aimed to report the frequency of BCR-ABL fusion transcript types with CML by multiplex PCR in Srinagarind Hospital, Khon Kaen, Thailand. Multiplex PCR for BCR-ABL was performed on 58 patients, to detect different types of BCR-ABL transcripts of the t (9; 22). All patients examined were positive for some type of BCR/ABL rearrangement. The majority of the patients (93.10%) expressed one of the p210 BCR-ABL transcripts, b3a2 and b2a2 transcripts were detected in 53.45% and 39.65% respectively. The expression of an e1a2 transcript was in 3.75%. Co-expression of p210/p230 was detected in 3.45%. Co-expression of p210/p190 was not detected. Multiplex PCR is useful, saves time and reliable in the detection of BCR-ABL transcript types. The frequency of one or other rearrangement in CML varies in different population.

Biography

Kanokon Chaicom is a Medical Technologist working at Department of Medicine, Medicine Faculty, Khon Kaen University, Khon Kaen, Thailand. She has completed her Bachelor's Degree of Medicine Science and Master's Degree of Public Health Management. She is Special in laboratory diagnostic Chronic myeloid leukemia.

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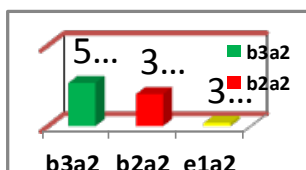


Figure 1: Frequency of BCR-ABL fusion transcript types with Chronic Myeloid Leukemia by Multiplex PCR in Srinagarind Hospital, KhonKaen Thailand



Figure 2: Determination of BCR-ABL fusion transcript product obtained by Multiplex PCR in agarose gel. M: BCR/ABL Marker, Line1: e1a2, Line2: No BCR/ABL translocation, Line3: b3a2, Line4: c3a2, Line5: b2a2, Line6: No BCR/ABL translocation, Line7: b2a2 and Lane N: Distilled water as negative control.

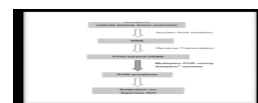


Figure 3: Procedure overview