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Observations on hematogones with light chain restriction.

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ABSTRACT

Light-chain restricted hematogones (LCR HGs) detected by flow cytometry (FC) may, occur in bone marrow mimicking involvement by a B-cell lymphoma. This phenomenon can present a diagnostic pitfall and negatively impact patient management, and may occur in other organs, including lymph nodes, For this reason, it is recommended to utilize, in case of LCR in lymph node, one additional morphological, phenotypical or molecular criteria for the diagnosis of lymphoma on cytological samples.

Dear Editor, we read with great interest the article by El Hussein S. et al: Hematogones with light chain restriction: A potential diagnostic pitfall when using flow cytometry analysis to assess bone marrow specimens, recently published on Leukemia Research [1]. The Authors describe the possible occurrence of light-chain restricted hematogones (LCR HGs) detected by flow cytometry (FC), which can mimic bone marrow involvement by a B-cell lymphoma. The Authors stress that this phenomenon can present a diagnostic pitfall and negatively impact patient management, as misinterpretation may upgrade disease stage in patient suffering from B-cell non-Hodgkin lymphoma (NHL). The Authors also reported that this phenomenon may occur in other organs too [2]. We fully agree with their conclusions and we would like to add some additional comments. Some years ago, we observed LCR in a lymph node cell suspension, processed by FC, in a HIV positive patient who had suffered from a follicular lymphoma (FL). The case was considered a relapse of FL but the histological control revealed a florid follicular hyperplasia [3]. We also recently described one false-positive cytological diagnosis due to LCR that turned out to be a case of progressively transformed germinal centers without IGH rearrangement at histology [4]. Checking on the literature we found similar cases showing LCR with or without CD10 positivity, without IGH gene rearrangement or t (14;18), described in different organs and different samples [2–9]. The common aspect of this heterogeneous group of cases was the clinical data, in almost all the corresponding patients, of immunodepression, as is the case in the series of El Husssain et al [1], or autoimmune diseases [2–9]. These clones, at FC analysis and, mainly in extra-nodal sites, did not seem to exceed 20% of the gated B-cells. Therefore, we called them “microclones” [5] and supposed that, in cases in which there is an impairment of the immune system either for autoimmune stimulation, or for a compensation for defective T-cell response, small clones of monotypic B-cell may produce LCR. The possible occurrence of LCR in non-lymphomatous processes has been one of the reasons for which a recent proposal for the performance, classification, and reporting of lymph node fine-needle aspiration cytopathology (the Sydney system) [4,10] adopted the criteria proposed for clonality assessment of lymphomas by the EuroClonality/BIOMED-2 guidelines [11], but recommends also to utilize, in case of LCR in lymph node FNAC, additional morphological, phenotypical or molecular criteria for the diagnosis of lymphoma on cytological samples.

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Declaration of Competing Interest

All authors do not have any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work

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