A 56-year-old male with history of asthma, chronic Hepatitis C infection, and previous heroin abuse presented to the Emergency Department with complaints of epigastric pain and vomiting. He was diagnosed with gastritis. During the workup, full blood count showed hemoglobin 13.5g/dL, leukocyte count 9.70 x 10^9/L and platelet count 118 x 10^9/L. Wright’s-stained peripheral blood smear showed normochromic normocytic red cells with occasional myelocytes and reactive lymphocytes. A few clusters of medium-to-large cells containing elongated oval-grooved nuclei with pale blue frayed cytoplasm at both ends were found at the tail-end of the blood smear (Figure 1B). The nuclei were larger than that of lymphocytes and have finely stippled or granular appearance (Figure 1A). These cells were likely epithelial cells and were reported as non-hematopoietic cells. Subsequent preparation from a fresh EDTA tube did not show any more epithelial cells. The presence of these abnormal cells may be due to improper mixing prior to aspiration by Sysmex® automated slide maker SP-10, which caused the analyzer to aspirate the buffy coat layer [1]. This may also occur due to a blunted tip needle used or from repeated unsuccessful venipuncture attempts [2,3]. These abnormal cells can also be rarely seen from finger or heel prick [4] due to transference of skin into the blood tube.

References

Keywords: Epithelial cells, blood smear

Ethics
Informed Consent: This study did not involve personal information; only laboratory data were reported. Patient consent was therefore waived.
Conflict of Interest: No conflict of interest was declared by the authors.
Financial Disclosure: The authors declare that this study received no financial support.
Figure 1. A) Microscopic findings with Wright’s-stained cells under x100. B) Microscopic findings with Wright’s-stained cells under x40.