

Morphology Update

Reactive lymphocytes in an allergic drug reaction

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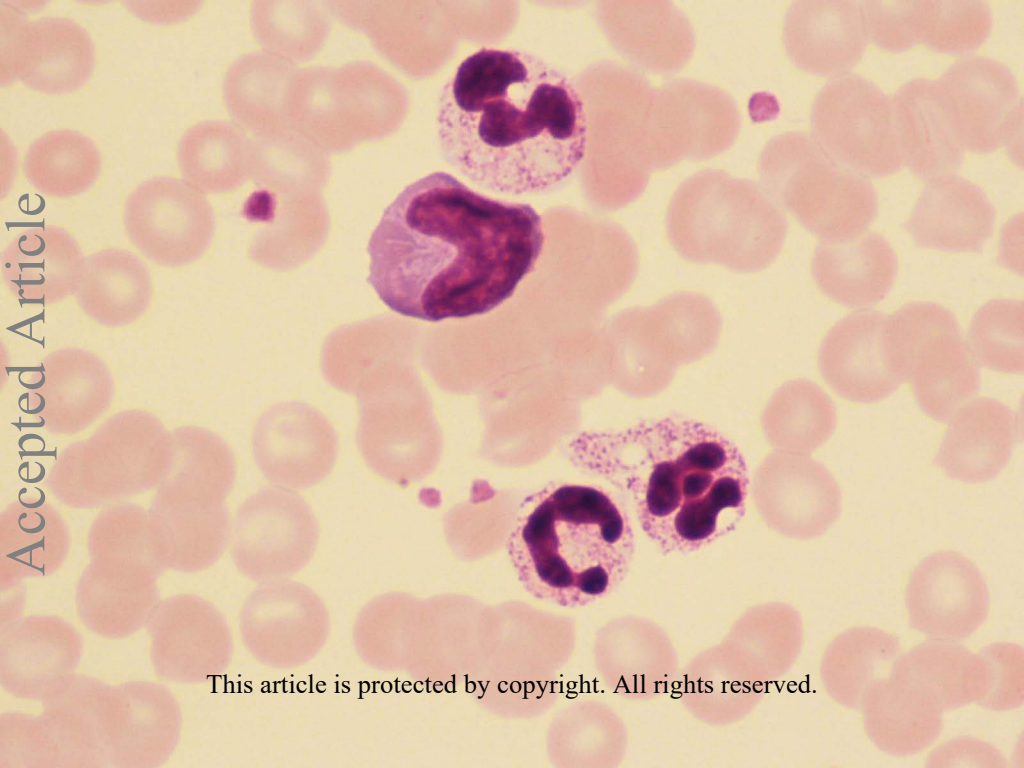
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A 34-year old woman developed epilepsy and was prescribed carbamazepine. One month later she presented with fever, a rash, and lymphadenopathy and was found to have liver failure. Her blood count showed white cell count $40 \times 10^9/L$, hemoglobin concentration 124 g/l, and platelet count $207 \times 10^9/L$. A blood film showed neutrophilia, with toxic granulation and vacuolation, and mild eosinophilia, without atypical cytological features in the eosinophils. There were numerous medium sized, atypical lymphocytes (Images). These had basophilic cytoplasm and some had lobulated or indented nuclei (top). Some lymphocytes had vacuolated cytoplasm (bottom left). Apoptotic lymphocytes were present (bottom right). Atypical lymphocytes are most often a response to infection, particularly viral infection. An adverse drug reaction is an uncommon cause. In this patient the changes in neutrophils may have reflected the liver failure rather than being a feature of the adverse drug reaction *per se*. The reactive lymphocytes, however, are consistent with the allergic drug reaction.

Conflict of interest: Nothing to report

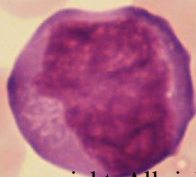
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