ANSWER TO PHOTO QUIZ (PAGE 212)

SOMETHING IS MISSING

DIAGNOSIS

These findings, combined with the lack of granulocytes in the peripheral blood, are consistent with pure white cell aplasia (PWCA), a rare haematological disorder.[1] It is considered an auto-immune phenomenon, with inhibition or destruction of the myeloid precursors of granulocytes. It is not clear if this is predominantly a cellular or antibody-mediated mechanism, but there is (indirect) evidence for both.[1,2] In thymoma-associated disease, there is granulocyte-monocyte colony forming unit (GM-CFU) inhibitory activity in most patients, likely due to antibodies.[3] Thymoma is the disease most often associated with PWCA, but is more often seen in combination with pure red cell aplasia. Other diseases that are reported together with PWCA are primary biliary cirrhosis, Parvo B19 infection, and anti-glomerular basement membrane disease.[3-5] PWCA can also occur as an idiosyncratic drug reaction and ibuprofen is one of the drugs known to cause this.[6] Different treatment strategies directed at the cellular and humoral immune system have been proposed. Corticosteroids, intravenous immunoglobulins, cyclosporine, cyclophosphamide, rituximab, plasmapheresis, and granulocytes-colony stimulating factor (G-CSF) have all been used in the management of disease and most were reported to be effective. PWCA sometimes resolves after thymectomy when associated with thymoma.[2,7] However, there is currently no 'evidence-based medicine' strategy to treat PWCA.[3] In this case, further investigation for all known causes of PWCA as listed above yielded negative findings. Human immunodeficiency syndrome was excluded and there were no demonstrable titres of antinuclear antibody and anti-neutrophil cytoplasmic autoantibody. Bone marrow cytogenetic analysis and tests for autoantibodies against G-CSF were not performed. Ibuprofen was attributed as the most likely causative agent since the patient had recently started taking this; there was an absence of other known associated diseases and this has been described before in three published cases. The ibuprofen was discontinued and the patient received human G-CSF (Filgastrim, 48 million units once daily). On day eight of admission, there were granulocytes in his peripheral blood again. One day later, the G-CSF was discontinued and meropenem switched to ceftriaxone and amoxicillin. Spinal fluid and blood bacterial cultures remained sterile. The polymerase chain reaction for enteroviruses, herpes simplex viruses 1 and 2, varicella zoster virus, *Listeria monocytogenes*, *Neisseria meningitides*, and *Streptococcus pneumoniae* in the spinal fluid were negative, as was the cryptococcus antigen test. He was discharged after completing two weeks of antibiotics and strongly advised to never use ibuprofen or other non-steroidal anti-inflammatory drugs again. A re-challenge was deemed too dangerous. After 33 days, during an outpatient follow-up appointment, the patient remained well, did not complain of back pain, and his neutrophilic granulocytes count was 2.6 x 10^9/l.

DISCLOSURES

All authors declare no conflicts of interest. No funding or financial support was received.

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