

ENDGAMES

We welcome contributions that would help doctors with postgraduate examinations. We also welcome submissions relevant to primary care. See thebmj.com/endgames for details

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FOR LONG ANSWERS

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CASE REVIEW

An unusual case of severe anaemia and lymphocytosis

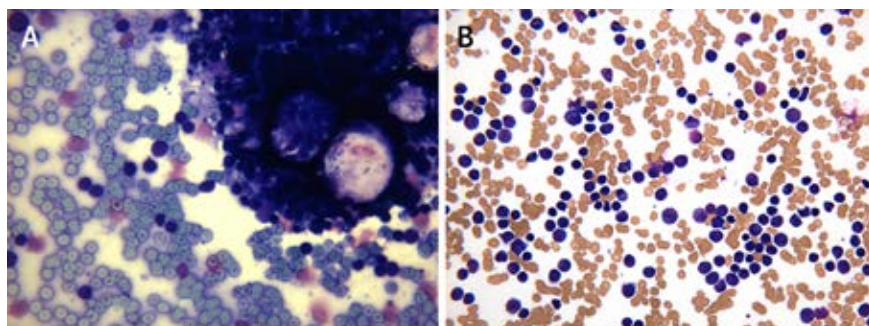


Fig 1

An 83 year old man was referred to the haematology clinic with a three week history of fatigue and shortness of breath on exertion. His symptoms had progressively worsened and on the day of review he felt breathless at rest. He had noted that he bruised easily over his arms and had recently been admitted for recurrent chest infections that required intravenous antibiotics. He had also lost 5 kg in weight during the past month.

His medical history included hypertension and elective repair of an abdominal aortic aneurysm. He had no travel history of note and did not smoke or drink alcohol.

On examination he appeared pale. He had palpable lymphadenopathy in the cervical region but no palpable hepatosplenomegaly and the rest of the examination was normal.

Observations were heart rate 90 beats/min, blood pressure 110/60 mm Hg, respiratory rate 18 breaths/min, oxygen

saturations 98% on room air, and temperature 37°C.

Blood test showed haemoglobin 44g/L (reference range 133-167), white blood cell count 125×10^9 cells/L (3.5-11), lymphocytes 122.4×10^9 cells/L (1.0-3.0), neutrophils 0.39×10^9 cells/L (2.0-7.0), platelets 54×10^9 /L (150-410), reticulocytes 1×10^9 /L (25-75), and C reactive protein 114.2 nmol/L (0.76-28.5). Urea, creatinine, and liver function tests including bilirubin were normal. Parvovirus polymerase chain reaction was positive at 172 000 copies and cytomegalovirus, adenovirus, and Epstein-Barr virus polymerase chain reaction were negative. A direct antiglobulin test was negative.

Fig 1 shows his bone marrow aspirate and fig 2 shows his peripheral blood film.

On flow cytometry, 55% of the bone marrow leucocytes were clonal, κ light chain restricted, and positive for CD5, CD19, CD38, and CD43; weakly positive for CD20; and negative for CD22 and CD79b.

1. What is the likely diagnosis?
2. What are the differential diagnoses for this patient's anaemia?
3. What other signs and symptoms can patients with this condition present with?
4. What is the staging system for this condition?
5. How can this condition be treated?

Submitted by SJ Chavda, S lyengar, and C Dearden

Patient consent obtained.

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ANATOMY QUIZ

Anteroposterior radiograph of the elbow joint

Identify the structures labelled A, B, C, D, E, F, G, and H in this anteroposterior radiograph of the elbow joint.

Submitted by Ke-Hua Pan and Ming-Hua Zheng

Cite this as: *BMJ* 2015;350:h2243

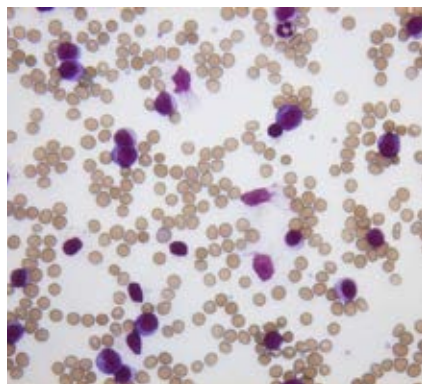


Fig 2

CONTRIBUTIONS

We welcome all contributions to the Endgames section.

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Longer versions are on the Education channel on thebmj.com.

Please submit via thebmj.com or contact Amy Davis at adavis@bmj.com

ANSWERS TO ENDGAMES, p XX

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CASE REVIEW An unusual case of severe anaemia and lymphocytosis

- 1 The bone marrow aspirate and peripheral blood film show small mature lymphocytes, which together with the flow cytometry results are consistent with chronic lymphocytic leukaemia (CLL).
- 2 The differential diagnoses include bone marrow infiltration by CLL leading to suppression of normal haematopoiesis; autoimmune haemolytic anaemia secondary to CLL; and infections, in particular parvovirus, in conjunction with CLL.
- 3 Patients are often asymptomatic. Symptoms and signs include lymphadenopathy, splenomegaly, fatigue, symptoms related to anaemia, and recurrent infections. Patients also have B symptoms: fevers greater than 38°C, drenching night sweats, and loss of at least 10% of body weight in six months.
- 4 Two staging systems are commonly used for CLL—the Rai and Binet staging systems.
- 5 Patients who are well do not require treatment and are followed up regularly under an active surveillance programme. Patients with active disease are treated with chemotherapy. Those with high risk disease can be considered for allogeneic stem cell transplantation after induction chemotherapy. Several promising novel targeted drugs are becoming available in both first line and relapse settings.

ANATOMY QUIZ

Anteroposterior radiograph of the elbow joint

- A: Lateral epicondyle of the humerus
- B: Trochlea of the humerus
- C: Olecranon fossa
- D: Medial epicondyle of the humerus
- E: Head of the radius
- F: Neck of the radius
- G: Radial tuberosity
- H: Coronoid process