South West Strategic Clinical Network
Somerset, Wiltshire, Avon and Gloucestershire (SWAG) Cancer Services

Lymphocytosis

Definition

Lymphocytosis is defined as peripheral blood lymphocyte > 4.5 X 10^9/L.

Types

Reactive lymphocytosis **-** Lymphocytosis in a patient who has an associated medical condition, and in whom the lymphocyte count is expected to normalize <2 months after resolution of that condition.

Clonal lymphocytosis **-** Lymphocytosis secondary to an established diagnosis of an acute or chronic lymphoproliferative disorder/ leukaemia.

Table 1 Common causes of lymphocytosis

Causes of reactive lymphocytosis	**Causes of clonal lymphocytosis**
Viral infections EBV (infectious mononucleosis), CMV, mumps, varicella, Influenza, rubella, hepatitis, roseola	**Lymphoproliferative disorders** chronic lymphocytic leukaemia (CLL), non-Hodgkin's lymphoma (NHL), hairy cell leukaemia
Other infections Bacterial infections, Toxoplasma Gondii, rickettsial infection, pertusis, tubercullosis	**Benign haematological abnormalities** Monoclonal B-cell lymphocytosis (MBL), precursor stage of CLL.
Other causes Stress (e.g. myocardial infarction), vigorous exercise or trauma, rheumatoid disease, post-splenectomy	**Leukaemias** Lymphocytic Leukaemia, e.g. ALL/ PLL and large granular lymphocyte (LGL) leukaemia.

Investigation of lymphocytosis

- A complete history and physical examination
- Peripheral blood smear (film), consider Immunoglobulins and LDH
- If a viral cause for reactive lymphocytosis is suspected, request Monospot (Paul-Bunnell) for infectious mononucleosis (EBV) and CMV serology.
- If a clonal cause for lymphocytosis is suspected (ie written in clinical details on request, or if appropriate given FBC results) the laboratory will perform immunophenotyping analysis of lymphocytes.
- An EDTA sample of peripheral blood to haematology lab for immunophenotyping may be advised in the sample/film comment.
- Note lymphocyte count >10 X 10^9/L is more likely to be clonal.

Management

For reactive causes of lymphocytosis, addressing the primary cause is key. In early stages of lymphocytosis, it may be difficult to distinguish between a malignant and reactive lymphocytosis. Serial blood counts may be necessary in order to differentiate between these two possibilities. . Repeating the FBC in 2-8 weeks time is reasonable as most cases of reactive lymphocytosis gradually settle down.

Advice regarding management is often given in the film comments by one of the haematology team.

Urgent referral to the haematology team is advised if the following are seen:

1. B symptoms (drenching night sweats, weight loss >10% and fevers >38)
2. Bone marrow suppression (Hb<10 g/dL, Platelets <100 x 10^9/L, neutrophils <1 x10^9/L) or autoimmune cytopenias
3. Progressive lymphadenopathy or splenomegaly
4. The presence of blast forms (ie, lymphoblasts) on the blood film

References

Incidental finding of lymphocytosis in an asymptomatic patient. BMJ 2009;338:b2119