

## A004 - ADULT PATIENTS WITH MACROCYTOSIS

Most causes of macrocytosis are not due to haematological diseases. Macrocytosis may be found as an isolated abnormality or be associated with anaemia, thrombocytopenia or other changes in the blood count. **A blood film is frequently performed in patients with macrocytosis to look for signs of haematological disease – further advice may have been given by haematologist as a film comment.**

### What causes should I consider?

- Alcoholism (the commonest cause of macrocytosis in the UK) or other occult liver disease (often in association with thrombocytopenia).
- Vitamin B12 or folate deficiency (may cause pancytopenia if severe).
- Drugs which interfere with DNA synthesis (including azathioprine, methotrexate, hydroxycarbamide, some HAART drugs).
- Pregnancy (physiological change).
- Haemolytic anaemia (reticulocytosis), especially if jaundiced.
- Hypothyroidism
- Smoking (Hb may be higher than normal).
- Rare haematological causes include myelodysplasia, aplastic anaemia.
- Idiopathic – some patients have MCVs out with normal range but no underlying abnormality.

### What should I look for?

- History – diet, alcohol, drugs, FH pernicious anaemia/autoimmune diseases, history of bowel surgery, artificial valves...
- Examination – anaemia, jaundice, glossitis, splenomegaly (seen with haemolysis, liver disease or myelodysplasia), neurological signs.

### What investigations may be useful?

- FBC - check blood film comment (may detect megaloblastic change, MDS, haemolysis or signs suspicious of marrow infiltration).
- Vitamin B12 and folate levels - if B12/folate deficiency expected start replacement therapy whilst awaiting results.
- TFTs
- LFTs (bilirubin raised in haemolysis; may detect occult liver disease).
- Reticulocyte count and Direct Antiglobulin Test (DAT aka. Coomb's) may be requested by lab if haemolysis suspected on blood film.

### When should I seek further advice or refer to haematology?

- B12 and/or folate deficiency – discuss with gastroenterology.
- Suspected underlying haematological disease e.g. MDS – discuss with haematology.
- Acute haemolysis – discuss with haematology.
- Non-haematological diseases e.g. alcoholism, hypothyroidism – discuss with appropriate teams if necessary.

### Also see

Clinical Knowledge Summary Anaemia - vitamin B12 and folate deficiency - Management  
<https://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!scenario> (please copy into your browser)