Iron Deficiency Camden Pathway

This pathway has been developed from published guidance, in collaboration with local gastroenterologists.
This guidance is to assist GPs in decision making and is not intended to replace clinical judgment.

NHS Camden Clinical Commissioning Group

Differential diagnosis of microcytic anaemia

Differential diagnosis of microcytic anaemia
- Iron deficiency anaemia
- Thalassaemia
- Sideroblastic anaemias
- Anaemia of chronic disease
- Lead poisoning (rare)

(Thalassaemia and sideroblastic anaemia associated with ↑ iron and ferritin and ↓ TIBC. Thalassaemia trait is associated with ↓ MCV, MCH and MCHC -often very low for the degree of anaemia)

Iron Deficiency

- Low serum ferritin (<15ug/l - interpretation difficult if co-existing conditions but is less likely if >50 ug/l)
- Red cell microcytosis (MCV) (<80 fl)
- Hypochromia (MCH) in the absence of chronic disease or haemoglobinopathy
- Anisocytosis (variation in size RBC), poikilocytosis (irregular shaped RBC), pencil cells and mild thrombocytosis may also be present

History

- Weight loss
- Travel history (hookworms or other parasites)

Symptoms of anaemia-fatigue, dyspnoea and palpitations.
Less commonly:
Headache, tinnitus, taste disturbance, pruritus, pica, sore tongue, dysphagia, impairment of body temperature regulation
If HB <7g/100ml- angina, marked ankle oedema, or dyspnoea at rest

Symptoms of iron deficiency without anaemia- fatigue, hair loss, lack of concentration, and irritability

GI symptoms including any GI bleeding:
- Family history eg colon cancer 2x first degree relative or 1 first degree relative <50 yrs, iron deficiency anaemia, haematological disorders eg. thalassaemia, bleeding disorders

Other sources of bleeding:
- Gynae
- Epistaxis
- Genitourinary

- Malabsorption conditions
- Blood donation history
- Diet including vegetarian
- Alcohol consumption
- Drug history - aspirin, NSAIDs, SSRIs, clopidogrel, steroids

Red flags
Dyspepsia
Upper GI bleeding- melaena / haematemesis
Weight loss
Abdominal mass
Significant rectal bleeding
Admit if unstable cardiovascular

Start Fe replacement

2 Week Wait referral to gastroenterology

Start Fe replacement

Refer to relevant speciality if underlying cause not manageable in primary care (do not refer to haematology)

Escalate to **2WW** if required e.g. postmenopausal bleeding, visible haematuria without UTI, unexplained non-visible haematuria and dysuria or a raised WBC on blood test

Examination

- May be normal, even with severe anaemia.
- Pallor.

Less commonly:
- Atrophic glossitis
- Angular cheilosis
- Nail changes -longitudinal ridging and koilonychia
- Severe Anaemia - Tachycardia, murmurs, cardiac enlargement, and heart failure
- Exclude abdominal mass, organomegaly, lymphadenopathy or any other features of intra-abdominal disease
- If rectal bleeding+/-tenesmus do PR
- If relevant CVS /chest to exclude HF
- Gynae exam if relevant examine

Investigations:
FBC if not already done
Consider dipstick urine (1% will have renal tract malignancy)
Consider coeliac screen (present in up to 4% - refer gastro if +ve)
Consider helicobacter pylori testing
(B12/folate if normocytic anaemia with borderline ferritin, indequate response to Fe supps, dietary deficiency, malabsorption or lack of folate supps in pregnancy)
FOB not recommended
Stool examination if relevant travel hx
Haemoglobinopathy screening when appropriate
If menorrhagia - clotting/TFT

WHO define anaemia as Hb men<13g/L and women<12g/L, pregnant women <11g/L

Is there unexplained anaemia with Hb <11g/L in a man or <10g/L in a postmenopausal woman?

Yes → **2 Week Wait referral**

Start Fe replacement

No

Male with unexplained iron deficiency anaemia (Hb 11-13g/L) or >50yrs with iron deficiency
Female postmenopausal Hb 10-12g/L or with iron deficiency
(escalate to 2ww if any additional concerns)

Yes → Refer to gastroenterology

Start Fe replacement

No

Assess and manage any underlying GI or Gynae symptoms

Iron Replacement (dietary changes alone are not sufficient to correct fe def anaemia)

Treat whilst awaiting investigations or for therapeutic trial in pregnant women, menstruating women
Ferrous fumarate 305mg capsules (100mg elemental iron/capsule) BD or ferrous fumarate 210mg tablets (68mg elemental iron/tablet) BD to TDS
If not tolerated, consider change to alternative iron salt e.g. ferrous sulphate 200mg (65mg elemental iron/ tablet) BD to TDS or reduce frequency
Advise patient to take with orange juice
If patient still unable to tolerate, refer.

GI adverse effects- a common cause of non-compliance, include abdominal pain, constipation or diarrhoea, black stools, nausea and heartburn. Some of which may settle with time. Can minimize by taking with or after food although this may reduce absorption, reducing dose frequency or recommending a laxative.

Iron absorption may be reduced if high intake phytates eg wholegrain cereals, polyphenols eg tea and coffee, calcium eg dairy products and if on medication raising gastric pH eg antacids/PPIs

FBC in 1 month

Significant Improvement

Hb should rise by 2g/100ml over 3-4 weeks

Continue with 3 months oral iron

Recheck bloods after 3 months treatment

Once Hb concentration and red cell indices are normal continue iron treatment for a further 3 months and then stop

Repeat bloods 3 monthly for the first year. Recheck bloods after a further year and again if symptoms of anaemia develop subsequently.

No Improvement

2 Week Wait referral reflecting clinical judgement

Refer Gastro or Gynae as appropriate

Reference
https://cks.nice.org.uk/anaemia-iron-deficiency

Comments & enquiries relating to medication:
CCCG Medicines Management Team mmt.camdenccg@nhs.net
Refer to current BNF or SPC for full medicines information

Clinical Contact for this pathway for queries: Camden.pathways@nhs.net

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