Eosinophilia

Definition
An eosinophil count >0.4 x10^9/L
- mild 0.5- 1.5 x10^9/L
- moderate 1.6 - 5 x10^9/L
- marked >5 x10^9/L.

Causes include
- allergic; atopic eczema, asthma, rhinitis, urticarial, ABPA
- infections; particularly parasitic
- drugs; penicillins, gold, sulphonamides, nitrofurantoin (check with BNF)
- connective tissue disorders; rheumatoid arthritis, polyarteritis nodosa, Wegeners granulomatosis, vasculitis, systemic lupus erythematosus
- skin diseases; pemphigus, bullous pemphigoid
- solid tumour malignancies; breast, lung, renal carcinoma, sarcoma, melanoma
- respiratory disease; Churg-Strauss, chronic eosinophilic pneumonia
- inflammatory bowel disease
- haematological malignancies; myeloproliferative disorders, lymphoproliferative disorders
- idiopathic hypereosinophilic syndrome

Clinical History
Consider
- medications
- history of atopy/skin rashes
- travel history
- contact with animals
- respiratory symptoms
- diarrhoea
- symptoms of auto-immune disease
- symptoms suggestive of underlying malignant process

Examination
- Evaluate for the underlying cause
- Evaluate for evidence of organ damage from eosinophilia (respiratory, cardiac, GI, skin, focal neurology)
Investigations in primary care

- Repeat FBC and film in 1-2 weeks if eosinophil count > 1.5x10⁹/L to confirm persistence
- Renal/liver function/CRP
- IgE levels in history of allergy/atopy
- Auto-immune screen including ANCA if rheumatological disease/vasculitis suspected
- CXR
- Stool samples for those with travel history/GI symptoms (ova, cysts and parasites)

Suggested Management/Referral

- Identification and treatment of secondary underlying cause
- Referral to relevant specialty; respiratory, dermatology, rheumatology
- Consider discussion with microbiology or infectious diseases for tests on returning travellers (serology)

Refer to haematology

- Persistent mild/moderate eosinophilia for >3 months without an obvious cause after investigation as above (routine)
- Any level of eosinophilia with evidence of end-organ damage (cardiac, gastrointestinal, pulmonary or neurological symptoms) which is not related to another underlying medical condition (urgent)
- Eosinophils >5x10⁹/L where the cause is not immediately apparent (urgent)

If unsure the Haematology Advice and Guidance service is available on the eRS