THINKING ABOUT EOSINOPHILIA IN ACUTE MEDICINE

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Clinical Presentation

- 67 year old female
- History of sinusitis and asthma, under anti-leukotriene treatment. Otherwise fit and well, non-smoker.
- Presented with a two week history of intermittent chest and back pain.
- In addition reported progressive shortness of breath on exertion over the past 6 months and a dry cough, along with a recent transient loss of vision lasting 3-4 minutes.
- On examination a pansystolic murmur was heard, loudest over the mitral area with radiation into the axilla. There was reduced air entry at both bases.

Investigations

- Chest X-ray: Globular heart, prominent hilar markings.
- Blood tests: Eosinophils: 4.28 x 10^9/L (0.0-0.8 x 10^9/L) = 40% of WCC, Troponin I: 126ng/L (<30 ng/L), BNP: 234ng/L (<100ng/L).
- CT chest: bilateral pleural effusions, pericardial effusion, widespread ground glass opacities.
- Echocardiogram: Severe mitral regurgitation.
- Full autoimmune/vasculitis screen: p-ANCA positive.

Eosinophilic granulomatosis with polyangiitis [EGPA]

- Vasculitis of small and medium sized arteries.
- Cardinal features include asthma, chronic rhinosinusitis and prominent eosinophilia.
- Typically three phases over a 20 year period: Prodromal, Eosinophillic, Vasculitic.
- Multi-system disorder, most commonly affecting the lung, followed by the skin.
- Cardiovascular manifestations cause approximately one half of deaths.
- Valvular insufficiency related to myocardial fibrosis is well recognised.
- ANCA found in 40-60% of patients, of these 70-75% are p-ANCA positive.

Diagnostic criteria – 1 example
American Rheumatology Association criteria
1) Asthma
2) Eosinophilia >10% of differential
3) Neuropathy
4) Pulmonary opacities
5) Paranasal sinus abnormality
6) Extravascular eosinophils found on biopsy

4 out of 6 criteria to be met (sensitivity 85%, specificity 99.7%)

Learning points

Rheumatology referral was made 1 month following discharge when p-ANCA returned positive, despite meeting 5 out of 6 of the criteria (suspected transient ischaemic optic neuropathy) and is now being referred for mitral valve replacement. Early recognition of vasculitis is crucial, particularly with regards to multi-organ involvement. Referral to rheumatology should not be delayed if suspected on clinical grounds.

References