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Tips for GP trainees working in haematology

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INTRODUCTION

Blood: the fluid carrying oxygen and nutrients to, and waste materials from, all tissues in the body. For most medical postgraduates however, this topic is poorly understood and considered rather complicated. A rotation through haematology can feel daunting: patients can be complex, suffer multiple comorbidities, and rapidly deteriorate; the registrar's bleep goes off continuously; and, not only do you have the haematology ward to contend with, there is the haematology day unit and referrals from other specialties. It is busy. Prepare for the rotation by rereading (or even reading) a concise textbook such as *Essential Haematology*.[1] Remember you are surrounded by a wealth of knowledge. Use the team (especially the patients); they want to help you. Make the most of your induction and be aware of key policies and where to find them; you'll be grateful of this later.

Haematology is not only about malignancy; you may also become familiar with screening for, and clinical presentations of, sickle cell disease and thalassaemia or how to use the diagnostic haematology service for investigating anaemia. You will learn a lot, while developing leadership and communication skills.

THE BASICS

1. Haematology patients are complex, so a focused but comprehensive clerking is essential when they attend the ward, even if it has been done before. Problem lists simplify your ward round, especially for new patients.
2. Think about history and examination in terms of cell lines. Look for, and ask about:
   a. problems with white cell production: leucopenia: any recent infections? sore throat? cough? urinary symptoms? leucocytosis: confusion? priapism?
   b. problems with red cell production: anaemia: tiredness? Shortness of breath? pallor? palpitations? polycythaemia: headache? vascular events? plethora? pruritus?
   c. problems with platelet production: thrombocytopenia or platelet dysfunction: easy bruising? epistaxis? *Per rectal* bleeding? haematuria? bleeding gums? petechiae? thrombocytosis: vascular events? pruritus?
   d. systemic B symptoms: night sweats, weight loss, fever.
3. Perfect your systems examination focusing on lymphadenopathy and the abdomen; you will palpate lots of livers, spleens, and nodes. Haematology provides excellent experience for professional exams and primary care.
4. Always check the throat for candida and treat. Antifungals often interact with other drugs, so ask your pharmacist.
5. Knowing everything about haematology is not needed but seize every opportunity to attend clinics and the lab.
6. Haematology nurse specialists have vast knowledge; listen and learn. If they bleep with concerns about a patient, run to the ward.

THE PATIENTS

7. Many day-unit attenders will be expert patients; get to know and learn from them. Often they will be there for hours. It can be quite the social hub! Make sure you become part of this and 'work the room'.
8. Good communication skills involve active listening. GP trainees should excel at this and really can make a difference to patients' experience of their illness.
9. Be proactive: talk to patients and relatives. Communication can prevent angst so never assume they know everything about the disease, especially prognosis. But if you don't know something don't make it up; ask your seniors. Document all discussions.
10. Know your patients inside and out and recognise any deterioration. Get into the habit of checking that you've checked.

PRESCRIBING

11. The governance issues around blood products are very important. Familiarise

yourself with the transfusion policies for both the unit and hospital. For further information about blood components, transfusions, and their complications, including the reporting of serious adverse events or reactions, see the Serious Hazards Of Transfusion (SHOT) website.[2]

12. You may encounter patients with bleeding disorders such as haemophilia and Von Willebrand disease. Familiarise yourself with local policies and know how to administer treatment.
13. Patients requiring irradiated blood products include those treated with purine analogue drugs (fludarabine, cladribine, and deoxycoformycin), adults and children with Hodgkin lymphoma, and all recipients of allogeneic haemopoietic stem cell transplantation from initiation of conditioning chemoradiotherapy, and during graft-versus-host disease (GVHD) prophylaxis. There are others: check the guidelines.[3]
14. Patients at risk of transfusion-associated GVHD should be informed of their need for irradiated blood products and given written information including an alert-card. Your blood bank has a list of these patients.
15. The prescription and administration of chemotherapy is strictly regulated, requiring specific training and certification. You should not be asked to prescribe or administer without this.
16. If unsure of a drug or its interactions then check!

ORAL ANTICOAGULATION

17. Know the indication for prescribing warfarin, and the target international normalized ratio (INR):
    a. Venous thromboembolism: first episode, target INR 2.5; recurrent, discuss with seniors.
    b. Antiphospholipid syndrome: target INR 2.5.
    c. Atrial fibrillation: target INR 2.5.
    d. Cardioversion: target INR 2.5.
    e. Valvular heart disease and prosthetic valves: target INR 2.5–3.5 depending on patient risk factors and valve type.
18. Many drugs interact with warfarin (including herbal or alternative medicines): ask patients if they take any. Check *BNF* for up-to-date information. If concerned about interactions, repeat an INR 3–5 days after the drug's initiation.
19. Management of high INR in the context of bleeding and non-bleeding patients is useful in all specialties. Be sure to double-check the following against your local guidelines:
    a. Major bleeding: four-factor prothrombin complex concentrate (for example, Beriplex®, Octaplex®) 25–50 u/kg with 5 mg IV vitamin K. (Fresh frozen plasma produces suboptimal anticoagulation reversal).
    b. Non-major bleeding: 1–3 mg IV vitamin K.
    c. Non-bleeding with INR >8: 1–5 mg oral vitamin K and withhold warfarin.
    d. Non-bleeding patients with INR >5: withhold 1–2 doses of warfarin and reduce the maintenance dose.
20. Most hospitals have a nurse-led INR clinic. You should familiarise yourself with your hospital's INR services and discharge requirements. Counsel patients beforehand. They should know their latest INRs, the indication for and intended duration of their treatment, and when to seek medical help. Also fax the GP this information on discharge.
21. For more information on oral anticoagulation, including perioperative management, see review by Keeling *et al*.[4]

HAEMATOLOGY EMERGENCIES

22. Neutropenic sepsis kills. Your department will have a protocol and an audited door-to-needle time. Revise the national guidelines[5] so you can recognise it. If you suspect it don't wait for the lab to call you with the count: treat!
23. Tumour lysis syndrome (TLS) is not as rare as you think. A few pointers:
    a. TLS can appear before starting treatment as a result of high malignant cell turnover or, more commonly, shortly after beginning treatment;
    b. risk of TLS is influenced by multiple factors, including tumour type, tumour burden, potential for rapid cell lysis, and pre-existing nephropathy. Watch out for lymphomas and acute leukaemias;
    c. TLS prevention and treatment are based on aggressive hydration, electrolyte corrections, and uric acid level reduction. A young adult without comorbidities should have as much as 4000–5000 mL of IV fluids per 24 hours 1–2 days before induction chemotherapy; and
    d. uric acid is reduced over 1–3 days by allopurinol so it isn't much good here. Rasburicase, a recombinant urate oxidase, is becoming increasingly popular. Check with your consultant and pharmacist.
24. Sickle cell crisis: these patients may present with pain and infection but can suddenly deteriorate so watch them closely. Hydration, analgesia, and oxygenation are the cornerstones of treatment.
25. Most importantly ... enjoy it!

Provenance

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