Haematology

FRAGMENTED DIAGNOSES

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Thrombocytopenia in the hospitalised patient on heparin remains a difficult clinical diagnostic algorithm. Patients often require therapy for presumed heparin induced thrombocytopenia (HITT) while awaiting confirmation of the diagnosis. We present two patients who developed thrombosis and thrombocytopenia on heparin with concomitant onset of fragmentation haemolysis and renal impairment. Fragmentation haemolysis has been reported, but is a rare manifestation of HITTS. Alternative diagnoses for this clinical constellation including the microangiopathic haemolytic anaemia syndromes (MAHA) which have a different, but equally urgent, therapeutic pathway. We use these two cases to illustrate the issues surrounding availability of diagnostic tests of differing sensitivity and specificity, both for HITTs and the alternative diagnoses. Both cases presented management challenges including the choice of anticoagulants, co-ordination of care around anticoagulation and the need for invasive procedures. Additional complexities surrounding intercurrent treatment requirements of concomitant diseases further complicated the management of these complex patients. These cases highlight the importance of being able to confirm or exclude the diagnosis of HITTS in a timely fashion.

POTENTIAL BENEFIT OF RIVAROXABAN ASSAYS IN OPTIMAL MANAGEMENT OF EXTENSIVE THROMBOSIS

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With fixed dose regimens, routine testing of rivaroxaban levels are not routinely recommended. We present a case where testing of levels revealed apparent under-anticoagulation in a young patient with recurrent venous thromboembolism, on fixed dose rivaroxaban and with thrombus propagation.

A CASE OF ACQUIRED HIGH MOLECULAR WEIGHT KININOGEN DEFICIENCY

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We present the case of an 82-year-old gentleman transferred to our hospital for investigation of a new periauricular lesion and

concurrent haematuria associated with an isolated prolonged activated partial thromboplastin time (APTT).

His past medical history included recurrent superficial spreading melanomas of the scalp for which he had previously been treated. Positron emission tomography (PET) performed 2 months prior to his presentation was clear. Liver function was deranged. His APTT was prolonged at >180 seconds and corrected to 32 seconds on a 1:1 mixing study. INR and fibrinogen were normal. A previous APTT was normal.

Factor VIII, IX, X, XI, XII and von Willebrand studies were normal. Mixing studies using PK and HMWK deficient plasma were then performed on the patient sample. The 1:1 APTT mixing study using PK deficiency plasma was 37.7 seconds, not indicative of a PK deficiency. However the 1:1 APTT mixing study using HMWK deficiency plasma failed to correct at 81.5 seconds, confirming an acquired HMWK/Fitzgerald factor deficiency.

Biopsy of the lesion and subsequent PET scan confirmed widespread relapse of melanoma with marked liver involvement. To our knowledge this is the first documented case of an acquired isolated HMWK/Fitzgerald factor deficiency in the setting of malignancy.

GASTROINTESTINAL BLEEDING ON NOACS – IMPACT OF REVERSAL AGENTS

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The advent of new oral anticoagulants (NOACs) has revolutionised the prevention of strokes in patients with atrial fibrillation. Earlier clinical trial data raised concerns regarding increased gastrointestinal bleeding with NOACs, compounded by the paucity of easily accessible reversal agents. Although ‘real-world’ data has recently found this risk to be lower than the clinical trial context, the risk of GI bleeding still remains increased in older patients. Recently, a prospective cohort study of a novel reversal agent idarucizumab has demonstrated promising results in reversing the anticoagulant effects of dabigatran. However, clinically appropriate use of such new reversal agents should be guided by quantitative assays to prevent their indiscriminate use. We present the case of an elderly patient on dabigatran for stroke prevention presenting with melaena who was given idarucizumab with effective reduction in dilute thrombin time and clinical resolution of bleeding post-infusion. Three months later, despite changing to apixaban, the patient experienced further bleeding and her admission was complicated by new onset hemiplegia whilst off anticoagulation. This case highlights the challenges of balancing bleeding versus clotting risk in the elderly and the utility of quantitative assays in guiding the management of such patients.