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Emergencies related to HIV infection and treatment (part 2)

Urgences associées à l'infection par le VIH et traitement (2e partie)

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Abstract HIV is a leading cause of mortality in resource limited settings, and HIV associated medical emergencies are common emergency department presentations in high-prevalence settings. HIV attacks the body's immune system, making infected individuals susceptible to severe infections of multiple organ systems including the respiratory tract, ocular structures, and central nervous system. HIV infected individuals also suffer from unique patterns of cardiac disease, gastrointestinal disturbances, and haematologic and oncologic conditions. Anti-retroviral therapy itself is also associated with numerous side effects, many of which can be life-threatening. Diagnosis and management of HIV infected patients require knowledge of the disease's pathology and the life threatening complications associated with it. Part 2 of this article reviews haematologic/oncologic, ocular, gastrointestinal, and treatment complications.

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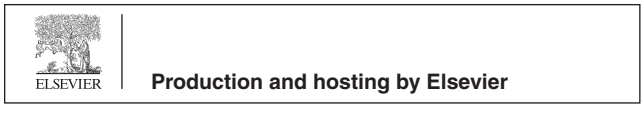

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Abstract Le VIH est l'une des principales causes de mortalité dans les environnements caractérisés par des ressources limitées, et les urgences médicales associées au VIH sont des motifs courants de consultation dans les services d'urgence dans les zones à forte prévalence. Le VIH attaque le système immunitaire, rendant les individus infectés plus susceptibles de contracter de graves infections de multiples organes, tels que les voies respiratoires, les structures oculaires et le système nerveux central. Les personnes séropositives souffrent également de types de maladies cardiaques uniques, de troubles gastro-intestinaux et de troubles hématologiques et oncologiques. La thérapie antirétrovirale est elle-même associée à nombre d'effets secondaires, dont beaucoup peuvent s'avérer mortels. Le diagnostic et la prise en charge des patients séropositifs nécessitent une bonne connaissance de la pathologie de la maladie et des complications mortelles qui y sont associées. La deuxième partie de cet article se penche sur les complications hématologiques/oncologiques, oculaires, gastro-intestinales et associées au traitement.

African relevance

- HIV is a major cause of mortality in Sub-Saharan Africa.
- Patients with HIV associated emergencies often present to African emergency departments with acute illnesses.
- Patients may be naive to their own infection, their CD4 count, or their specific HAART regimen, so clinicians require a broad knowledge base to manage these presentations.
- As HAART becomes more widely available across the continent, complications of treatment will become an increasingly common issue.

Introduction

Part one of this series discussed the pathophysiology of HIV and associated respiratory, cardiac, psychiatric, and neurologic complications. The paper highlighted a variety of opportunistic infections (OI) and the challenges of tuberculosis (TB) treatment. Part two continues from here and describes haematologic/oncologic, ocular, gastrointestinal, and treatment complications.

Haematologic/oncologic

HIV infected patients may present to the emergency centre (EC) due to symptoms associated with haematologic and oncologic diseases related to their HIV infection. While the most common reason for presentation within this category is severe anaemia, both thrombosis and symptoms related to malignancies, either known or previously undiagnosed, also occur with regularity.

Anaemia

Anaemia in HIV infected persons may be due to the infection itself, anaemia of chronic disease associated with HIV infection, bone marrow infiltration or suppression by HIV or OIs (especially TB), or due to the medications used to treat the infection and prevent OIs, particularly zidovudine (AZT) and cotrimoxazole.[1] While determination of the actual cause of the anaemia is generally pursued outside of the EC, the initial laboratory tests should be sent from the EC, particularly if the patient's anaemia warrants transfusion, as the diagnostic workup must be postponed for at least three months after transfusion to ensure accuracy. Important tests to be sent prior to transfusion include full blood count, reticulocyte count, iron studies, serum B12 and folate levels, and tests for haemolysis including LDH, peripheral smear, haptoglobin and bilirubin levels. Coagulation profiles should be sent in cases of bleeding leading to anaemia, and creatinine and blood urea levels may be useful in indicating renal dysfunction which may have led to or contributed to chronic anaemia. Criteria for transfusion in HIV patients are the same as those for uninfected patients, and O negative blood should be used if blood matching the patient's blood type is not available. Other cytopaenias may be present with or without anaemia and may also be due to HIV infection. Particular attention should be paid to patients with thrombocytopenia, as both idiopathic thrombocytopenic purpura and thrombotic thrombocytopenic purpura are more common in HIV-infected persons, and have high rates of morbidity and mortality; a peripheral smear should be sent immediately to evaluate for schistocytes (RBC fragments) if either of these conditions are suspected.[2]

Thrombosis (deep venous thrombosis/pulmonary embolism)

Although the mechanism is not yet well understood, it has been demonstrated that HIV patients are four-times more likely to develop deep venous thrombosis compared with uninfected persons of the same age and gender.[3] HIV-infected patients are also 43% more likely to develop a pulmonary embolism.[4] Thrombotic potential has been found to increase in direct relationship with opportunistic infections, malignancies, AIDS-related nephropathy and auto-immune haemolytic anaemia and in inverse relationship to the CD4 count.[5] Consideration of the interaction between warfarin and protease inhibitors (PI) and non-nucleoside reverse transcriptase inhibitors (NNRTI) must be considered for HIV-infected patients being treated for thrombosis.

AIDS-related malignancies

There are five AIDS-defining malignancies, all of which have been found to be largely virally-mediated: invasive cervical cancer (HPV), Kaposi's sarcoma (HHV-8), Burkitt's Lymphoma (EBV), Immunoblastic lymphoma (EBV and HHV-8), and primary CNS lymphoma (EBV).[6,7] Many other