



# Enfermedades Infecciosas y Microbiología Clínica

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Consensus document

## Executive Summary. Consensus Statement of the National AIDS Plan Secretariat, Spanish Society of Emergency Medicine and AIDS Study Group of the Spanish Society of Infectious Diseases and Clinical Microbiology on Emergency and HIV Infection

Expert Panel of the National AIDS Plan Secretariat, Spanish Society of Emergency Medicine and AIDS Study Group of the Spanish Society of Infectious Diseases and Clinical Microbiology<sup>♦</sup>

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### ABSTRACT

Emergency Services (ES) are the cornerstone of our health system and therefore it cannot remain indifferent to the HIV advances that have drastically changed the landscape of the disease, so, emergency specialist updating is not only necessary, it is also essential.

The purpose of this paper is to support non-HIV specialists in treating patients with urgent diseases resulting from HIV infection or related to it.

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### Resumen del Documento de Consenso de la Secretaría del Plan Nacional sobre el Sida/SEMES/GESIDA sobre Urgencias y VIH

### RESUMEN

Los servicios de urgencias (SU) son la piedra angular de nuestra sanidad y, por tanto, no pueden permanecer indiferentes a los avances que se han producido en la infección por el virus de la inmunodeficiencia humana (VIH) y que ha cambiado radicalmente el panorama de la misma; así, su actualización entre los especialistas en urgencias no solo es necesaria sino que es imprescindible.

El objetivo de este documento es dar soporte a los profesionales —básicamente no especialistas en el tema— a la hora de tratar a pacientes que presentan una patología urgente derivada de la infección por el VIH o relacionada con la misma.

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### Introduction

Emergency Services (ES) are the cornerstone of our health system and therefore it cannot remain indifferent to the advances that have occurred in HIV infection and that have radically changed the landscape of the disease. Therefore, emergency specialist updating is not only necessary, it is also essential.<sup>1</sup>

The purpose of this paper is to support professionals, non-HIV specialists to treat patients with urgent pathology resulting from HIV infection or related to it.

### Emergency medical history

Human immunodeficiency virus (HIV) infection has a number of interesting features compared to the general population, therefore it makes necessary to collect in the medical emergency history a huge number of specific data. The first step in evaluating a patient is to determine the possibility that he is infected with HIV. It is necessary to ask the patient if it has done recently serology for HIV or if he knows their HIV status.

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The best risk predictor of opportunistic infection is the absolute CD4 lymphocyte count and percentage. CD4 cell counts below 200 cells/mm<sup>3</sup> are associated with a high risk of developing opportunistic infections.

#### Recommendations

- In the ES it should be alert to possible cases of primary infection or HIV-associated pathologies in order to reduce late diagnosis (A-II).
- In patients with known HIV status it is essential to know the immune status because this information will guide us to the necessary examinations and laboratory tests to find related opportunistic diseases (B-III).

#### Drugs

Due to the complexity of ART an specialized management would be essential. You must know in depth the characteristics of the drugs, their behavior in combination with others, and the profile of adverse effects and drug interactions.

The acute toxicity of ART is a potential reason for emergency consultation and it could require changing the drug involved. Do not forget the potential for drug interactions of ART (especially PIs and NNRTIs) when you prescribe a new drug to a patient with HIV on ARV.

#### Recommendations

- The emergency physician should know the basic principles of ART and its importance in terms of morbidity and mortality in HIV-infected patients and refer to HIV specialist to control when it is appropriate (A-III).
- It is recommended to take into account drug interactions when deciding to prescribe a new drug in a patient on ART in the emergency department (A-III).

#### Urgent request for side effects of art and management

ART side effects are the main cause of change in treatment and loss of grip to it. Side effects can be distinguished from home long-medium term, such as dyslipidemia, insulin resistance, diabetes or body fat redistribution, that usually are detected in the controls at the specialized consultation, to side effects early onset, which are the most common in the ES and are usually gastrointestinal, cutaneous, neuropsychiatric and cardiovascular.

#### Recommendations

- After starting antiretroviral therapy, is recommended monitoring in 2–4 weeks, clinical and analytical control of tolerance and presence of adverse effects (B-III).
- Should be considerate all the drugs the patient is taking to prevent and to evaluate possible interactions/adverse effects (B-III).
- Recommended controls include an analytical calculation of glomerular filtration rate and an elementary study of urine (A-III), mainly in patients treated with tenofovir (A-II). If glomerular filtration rate <50 tenofovir should not be used (A-III).
- During the first 2–4 weeks after starting EFV treatment, it usually presents sleep disorders, dizziness, difficulty concentrating, headache, but do not constitute grounds for withdrawing because the symptoms usually tend to disappear (A-II). It discourages the use of efavirenz in patients with a psychiatric history (A-III).

#### Fever of unknown cause

Fever is the most common clinical manifestation in patients with HIV infection. Approximately 90% of cases have an etiologic

diagnosis after a simple study. These syndromes are usually fever of short duration and self-limiting.

The most common infection diagnosed in cases of unknown fever origin in a patient with HIV infection is the tuberculosis. In general, the causes of unknown fever origin in a patient with more than 200 CD4/mm<sup>3</sup> are the same as in the general population, except for tuberculosis and NHL. In patients with less than 200 CD4/mm<sup>3</sup>, differential diagnosis must be broader.

#### Recommendations

- In the presence of unknown fever origin in a patient with HIV infection regardless of CD4 count and given the high prevalence in our country should be ruled out tuberculosis (B-II).
- In patients with CD4 > 200 cells/mm<sup>3</sup>, besides to ruling the same pathologic conditions in the general population, it would be necessary to include tuberculosis testing and to discard NHL (B-II).

#### Dyspnea in patients infected with HIV

In patients with HIV infection, dyspnea is one of the symptoms that most often lead the patient to the emergency room. The origin of dyspnea can be grouped into four main causes: infectious or respiratory, cardiac, metabolic and psychological. In HIV infected patients, lung disease, are most frequent in consultation and it is one of the leading causes of morbidity and mortality.

#### Recommendations

- In patients with moderate-severe immunosuppression (CD4 < 200 cells/mm<sup>3</sup>) and dyspnea it tends to be severe with high mortality so you must act quickly to identify the cause as soon as possible and start specific treatment (C-III).
- In most cases it is recommended to start empirical treatment of the most common diseases to have diagnostic confirmation (C-III).

#### Neurological emergencies

20% of HIV-infected patients will have a clinical presentation of neurological complication, and they often will go to the emergency department (ED) for this reason. The diagnosis must always be individualized and based on: the clinic history, CD4 cell count, whether or not on ART, epidemiological history, if the disease affects other organs, etc. In many cases MRI of head and cervical spine is indicated but in most there is only available CT and the PL to diagnose.

#### Recommendations

- The most common cause of encephalitis is CMV and although not very common today, it has been to be excluded especially in severely immunosuppressed patients (A-II).
- Faced with a decreased level of consciousness and/or presence of focal involvement in neurological examination, it has to discard the existence of a brain tumor (A-II).
- In HIV-infected patients, should always be performed prior to CT scan PL (B-III).
- The most common cause of LOE with contrast enhancement is toxoplasmosis, and, to this clinical and radiological empirical treatment may be start to treat this infection (A-II).

#### Diarrheic syndrome

Diarrhea is the most common gastrointestinal symptom in HIV-infected patients and 50–90% has been presented at some point in their clinical course.

The clinical and laboratory status of the patient determine if there is indication of hospital admission. Empiric treatment may

be justified if there is bacteraemia and severe involvement of the general state pending the results of cultures taken.

#### Recommendations

- If you suspect diarrhea due to drugs, they will be removed and be sent as soon as possible to the specialist to assess its reintroduction or permanent replacement (B-II).
- Empiric treatment may be justified if there is bacteraemia and severe involvement of the general state pending the results of cultures taken (B-III).

#### Psychiatric emergencies

HIV-infected patients very often go to the emergency services for medical or psychiatric reasons for consultation related to mental health. About 2% of the visits to psychiatric emergency unit corresponded to HIV-infected patients.

#### Recommendations

- It is important to diagnose and treat psychiatric disorders in HIV-infected patients, because they may complicate the prognosis of the disease (B-III).
- It is necessary to rule out psychiatric symptoms due to the same infection, opportunistic diseases or medical treatments (B-III).
- General aspects to consider related to psychopharmacological treatment in HIV-infected patients are:
  - Administration of lower initial doses and slow increase because they use to be more sensitive (lower tolerance) (B-III).
  - Programming the least complex dosing effort to ensure compliance (B-III).
  - Take into account the side effect profile to avoid unnecessary adverse events. Serotonergic and antidopaminergic effects must be monitoring (B-III).
  - To consider metabolic pathways and drug clearance to minimum to reduce both drug interactions and injuries in the target organ (B-III).

#### Vision loss

The prevalence of ocular complications is correlated with a CD4 lymphocyte count < 100 cells/mm<sup>3</sup>. Over 50% of HIV-infected patients have complications of anterior segment eye.

#### Recommendations

- Faced with an eye injury in HIV-infected patient should undergo a fundus and a neurological examination (B-III).
- In cases where retinitis is suspected, due to their impact, it will start empirical treatment (B-II).
- We recommend referral to an ophthalmology specialist in cases where there is involvement of the posterior segment (B-II).

#### Intensive care unit and HIV

In the developed countries the percentage of admissions of HIV-infected patients in the ICU ranges between 5 and 10%. The main reason for admission is respiratory failure, mainly secondary to pneumonia PJP.

#### Recommendation

- The criteria for admission to the ICU did not differ from the general population and should be done in relation to patient prognosis and should not be excluded due to compromised immuno-virological situation (B-III).

#### Pediatric emergencies in HIV infection

The child diagnosed with HIV infection in the ES should be evaluate fundamentally emphasizing the clinical, immunological and virological actual situation. The most common infections in young children are upper respiratory infections of viral etiology, as well as otitis, pneumonia, gastroenteritis and infections tract.

#### Recommendations

- In HIV-infected children who goes to the emergency services it is essential to know the antiretroviral medication intake, and recent immuno-virological situation (C-III).
- Lactic acidosis is a serious complication associated with antiretroviral medication that requires interrupt urgently the medication (B-II).
- With ART opportunistic infections in children HIV-infected have decreased significantly by what the focus of the child with fever should be based on their most recent immune status (B-II).

#### Postexposure prophylaxis

The decision to initiate occupational post-exposure prophylaxis (PPEO) or non occupational (PPENO) is based on the probability or risk of transmission of infectious agent in each scenario. Occupational exposure requires urgent evaluation and sometimes requires prophylaxis without delay. Importantly, the effectiveness of prophylaxis is never 100%.

#### Recommendations

- In the emergency services must be a consensus protocol for performance against exposure to rapid diagnostic methods and 24 h access to the drugs used in PEP (A-III).
- The display of PPE will be made after assessment of the source, receptor status and characteristics of exposure (A-III).
- Initiation of PEP should be early (ideally in the first 4 h) for 72 h. It will last for 4 weeks (A-II).
- PEP is not recommended after 72 h (A-III).
- When given PEP recommends a conventional dosage of three drugs, recommending fixed combinations (TDF/FTC or ZDV/3TC) with a PI. In case of failure to administer an IP/r this may be substituted by EFV or 3 NRTI therapies (A-III).
- Should be supervised by an expert in the management of HIV-1, re-evaluating its prescription to 24–72 h of onset (B-III).
- Non-occupational PEP should be recommended in situations including the so-called “appreciable risk” provided the following conditions: early onset, absence of contraindications to take FARV and ensuring clinical and analytical (B-III).
- In cases of sexual exposure assess of STIs and pregnancy risk (A-III).

#### Sexually transmitted infections

HIV infection is clearly intertwined with STIs, not only for sharing mode of transmission but also by the increased risk of HIV transmission.

#### Recommendations

- All sexually active person with EUG patient should be tested for HIV (A-III).
- Must be all symptomatic patients with urethritis or cervicitis even when microscopic observation is not diagnostic (C-III).
- Women who are contacts of a man with UG or Chlamydia NGU should be treated empirically (B-II).

- At 3 weeks of treatment of urethritis or cervicitis should be an interview to ensure compliance, and resolution of symptoms (B-III).
- In a genital ulcer is recommended sampling as far as possible to establish an etiologic diagnosis based on microbiological tests (A-III).
- Counseling is recommended diagnostic algorithms and treatment of the EUG simple. It must ensure the monitoring of the patient in a specialized in assessing therapeutic response and perform screening for other STIs (A-III).
- Maintain abstinence until complete healing of genital ulceration (A-III).
- In patients with HIV infection should be treated with the same regimen that seronegative patients, penicillin remains the treatment of choice (A-II).
- In pregnant women, penicillin is the treatment of choice, including the allergic ones, in which desensitization should be done prior to treatment with penicillin (A-III).
- In any patient with HIV infection with neurological symptoms and/or therapeutic failure is indicated performing a lumbar puncture to rule out neurosyphilis (A-III).

### Drugs and emergency

The use of illegal drugs and alcohol is associated with risk behaviors for HIV infection and transmission. A recent meta-analysis has shown the consumption of alcohol is an independent risk factor for unprotected sex, interacting directly with the transmission of HIV and other STIs.

#### Recommendations

- In case of suspicion of being a victim of chemical submission, a negative drug test does not exclude the possibility of sexual assault, having taken preventive measures against the risk of sexually transmitted infections (C-III).
- In cases of body-packers should be ruled treatment with oral polyethylene glycol solutions, to its complete expulsion. If the patient has clinical or toxic urine test negative initially the color turns positive, indicating an urgent laparotomy, being suggestive of breaking balls drug, with the risk of death (B-III).

### Additional explorations in emergency and HIV infection

The application and interpretation of laboratory data in the emergency department must always be based on clinical history and physical examination of the patient, so these tests can never replace clinical judgment.

#### Recommendation

- Given the clinical suspicion of HIV infection in a patient who does not know their HIV status, the emergency physician should recommend performing the test the patient urgently or deferred depending on the severity (B-III).

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### Conflict of interest

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### Appendix 1.

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