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Association of Tuberculosis Spinal Cone and Ten Other Locations during an Immune Restoration in Patients HIV Positive

Mohammed El Habib Labdouni*, Anouar Benabdellah, Aouicha Kaid and Nadjat Mouffok

Faculty of medicin, University of Oran, Algeria

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***Corresponding author:** Mohammed el Habib Labdouni, Faculty of medicin, University of Oran, Oran, Algeria, Tel: +213 556 564 340; Email: hlabdouni@gmail.com

Abstract

Objective: To illustrate an original case of double intramedullary tuberculomas, of the spinal cord associated to ten other localizations, occurring at HIV positive.

Methods: Case report of a 33 year-old man with HIV infection under antiretroviral therapy who developed 02 months later an unexplained urinary retention and progressive weakness in the legs, leading to the identification of an additional tuberculoma of the conus medullaris associated to 10 other localizations.

Results: The patient was on a 02 months course of rifampicin, isoniazid, pyrazinamide, ethambutol corticosteroides, then 10 months under isoniazid and pyrazinamide and responded well to conservative treatment.

Conclusion: Immune restoration in its infectious form, may reveal a latent tuberculosis previously and thus lead to a spread of the infection generating multiple localizations exceeding 10 locations as in our case; hence the rule to detect latent or overt tuberculosis before any initiation of HAART.

Keywords: Intramedullary tuberculoma, Iris, Necrotic, Paraplegia

Introduction

Tuberculosis is one of the most common opportunistic infections, among patients living with HIV, especially in areas with a high TB prevalence [1], such Algeria. HIV promotes the progression from infection with Mycobacterium tuberculosis, to active TB disease, among both people with recently acquired infection and those with latent ones. These two infections interfere and impact the pathogenesis phenomena of each other. Regarding atypical clinical presentations, diagnostic and complications, with an increasing of multivisceral tuberculosis form [1,2] HIV/TB co-infection continues to be a threat to healthcare providers worldwide . The antiretroviral therapy may gives an immune reconstitution inflammatory syndrome (IRIS) which is an adverse consequence of the restoration of pathogen-specific immune responses in HIV-infected patients during the initial period of this highly active antiretroviral treatment (HAART), and can figure out latent tuberculosis and damaged several viscera.

Results

Patient KB aged 33 years old recently diagnosed HIV positif, under (HAART) since 02 months, consults for paraplegia associated to high fever, cough and respiratory distress. The examination of the patient showed a gradual onset over a week by weakness on paraplegia, urinary retention and polypnea. Fever at 39 °C, the patient was confused, with a delirium, dysarthria, paraplegia and sphincter disorder.

Biologically the patient had a severe pancytopenia his hemoglobin was very low at 6.70g.dl, however we note a hypermonocytosis at 12% and lymphopeniea at 1200c/mm^3 and an increasing of the transaminase. Other classical biological disorder in tuberculosis was found which is to deep hyponatremia 118mEq/l, it is related as known to the syndrome of inappropriate antidiuretic hormone (ADH) secretion (SIADH).

Radiologically the thoraco-abdominal CT scan Figure 1 showed a typical miliary, with a mediastinal lymph nodes, right

laterotracheal adenopathy about 14mm, and prevascular calcified one 8mm, we note also a necrotic intra, and retroperitoneal adenopathy, associated to a thickening of the peritoneal layers. Splenic miliary with a splenomegaly 169mm/69.9mm/102mm were found and an homogeneous hepatomegaly, a regular hypoechogenic nodule of the head of the pancreas, at the ultrasonography about 12,6mm 20,6mm (Figure 2).

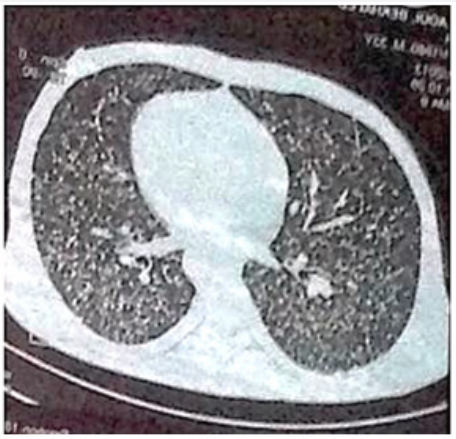

Figure 1: CT Chest showing typical tuberculosis miliary.

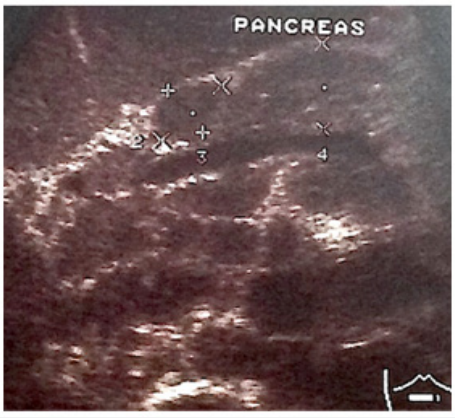

Figure 2: Pancreatic Tomography pancreatic nodule of 12,6mm /20,6mm.

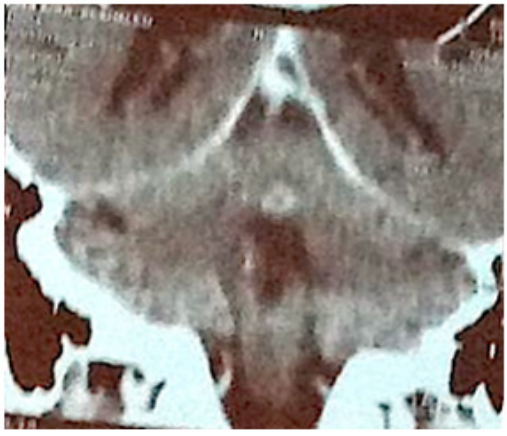

Figure 3: Cerebral CT cerebellar tuberculoma.

The cerebral scan objectives: multiple cerebral and cerebellar tuberculoma (Figure 3). To investigate the paraplegia, we have performed a spine MRI which revealed : two spinal cord tuberculoma that measure 10mm and 7mm respectively at the medullary end part to which is added damage to the vertebral bodies of D 04, D 12, and L4 (Figure 4).

Figure 4: Spine MRI revealed two intramedullar hyperintense nodules (tuberculoma)with a damage in the vertebral bodies.

The diagnosis of intramedullary tuberculomas of the spinal cord was retained, associated to 10 other localizations: pulmonary, cerebral, pancreas, spondylodiscitis, chylous ascitis (Figure 5), hematologic, splenic, hepatic, mediastinal and peritoneal .The evolution of the patient was spectacular on TB.

Figure 5: chylous ascitis with a high rate of triglycerides.

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Discussion

The proportion of extra pulmonary tuberculosis (EPTB) has been reported to be higher, among HIV-infected individuals, than among the immunocompetent population .Although IRIS is associated with certain infectious and non-infectious conditions, Intra- medullary tuberculomas as secondary manifestations account for two of 100,000 cases of TBC and two of 1,000 cases of dissemination to the CNS [3].

The morbidity associated with HIV/TB co-infection is significantly higher than for the other conditions. HIV-infected patients with low CD4+ T-cell counts 'immunologically' tolerate the presence of the tubercle bacilli as the host is unable to mount an inflammatory response [4] Tuberculosis-associated IRIS is considered critical in developing countries, where the proportion of HIV/TB IRIS is reportedly high, ranging from 10% to 43% .

Although the pathophysiology of IRIS is incompletely understood, sustained Th1 responses evident by increased IFN-c responses against the mycobacterial antigens, followed by dysregulation of cytokine secretion and T-cell migration to the inflammatory site have been demonstrated. Our case is very originale because this association is never been reported in literature.

Conclusion

Immune restoration in its infectious form, may reveal a latent tuberculosis previously, and thus lead to a spread of the infection generating multiple localizations exceeding 10 locations as in our case; hence the rule to detect latent or overt tuberculosis before any initiation of HAART.

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References

1. World Health Organization Management of tuberculosis and HIV coinfection. Clinical Protocol for the WHO European Region (2013 revision).
2. Kemalog˘lu, A Gu¨r, K Nas, R C evik, H Bu¨yu¨kbayram, et al. (2001) Intramedullary tuberculoma of the conus medullaris: case report and review of the literature. Spinal Cord International Medical Society of Paraplegia 39.
3. Ebner FH, Roser F, Acioly MA, Schoeber W, Tatagiba M (2009) Intramedullary lesions of the conus medullaris: differential diagnosis and surgical management. Neurosurg Rev 32: 287-300.
4. Shankar EM, Vignesh R, Ellegård R, Barathan M, Chong YK, et al. (2014) HIV–Mycobacterium tuberculosis co-infection: a 'danger-couple model' of disease pathogenesis. Pathog Dis 70(2): 110-118.

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