

Profile of patients with cerebral toxoplasmosis in the era of antiretroviral therapy

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Introduction

The toxoplasmosis is opportunistic infection frequents during the disease HIV-AIDS. It is a major public health problem because of its high rate of morbidity and mortality. This outbreak is attributable largely in the inobservance of the antiretroviral treatment. The objective of this article is to update the data on the intellectual toxoplasmosis in the department of neurology for more 10 years after the last studies. This study aimed to describe epidemiological, clinical and immunological profile of patients with cerebral toxoplasmosis to offer to the practitioners of marks susceptible to improve the care of these patients.

Context and Method of This Study

This is a prospective cross-sectional descriptive study conducted under the Department of Neurology of the University Hospital of Cocody in Abidjan. It involved 212 patients hospitalized in the period from January 2010 to December 2012

The criteria of inclusion were the following ones: 1. Patients of both sexes and any age hospitalized for an array of meningo encephalitis or intracranial expansive process 2. HIV- positive or not. Patients who had the incomplete medical cases were excluded.

The demographic data (sex, age, profession), private hospitals (deadline of hospitalization, clinical signs), paracliniques (cerebral scanner, hematology), the treatment and the evolution were notified.

Results

We found 90.6% of young adults fewer than 40 years, a slight female and 40.5% of patients without profession. The socio-demographic data found in our study are listed in the **board I**. The median and mean hospital stays were respectively 17 and 11 days. The main reasons for hospitalization summarized in **board II**, are dominated by motor deficits and headaches. There were co morbidities associating toxoplasmosis and other opportunistic infection: a generalized prurigo (24.5%), tuberculosis meningitis (18.4%), pulmonary tuberculosis (16.5%) and oral candidiasis (11%). Clinical examination and CT performed in 84.4% showed that the pseudo tumor form was predominant, with unique brain lesions in 50.6% of cases and lobar predominance (60.9%). A positive HIV serology was found in 56.6% percent of cases, with a predominance of serotype 1 (65%) (**Figure 1**), and severe immunosuppression in 88.9% of patients (CD4 <200 cells / mm³). Cotrimoxazole was the main curative treatment, prescribed for all patients (100%). We recorded clinical improvement in 60.4% of patients and 24.5% of deaths (**Figure 2**).

Discussion

In Côte d'Ivoire, the incidence of the cerebral toxoplasmosis during the infection with HIV always seemed high. In our series, it appears a 7, 8 % frequency on a sample of 2691 patients hospitalized over a period of 03 years. The average of patients was 39, 8 years, ranging from 15 to 81 years. The age group of 20 to 55 years was the most affected with 90, 6 % of our strength. These data of our series are in agreement with those of DEKI in 2001 [1], of YAPI in 2009 [2] and AVODE on 2005 [3].

We observed an ascendancy of female subjects (62, 7 %). The sex-ratio (H/F) is 0, 59 in favor of the women. This result is close to that of the YAPI in 2009 [2] which obtained a sex-ratio of 0, 6 with a feminine ascendancy. We observed as cardinal signs: The headaches (163 cases), the driving deficit (141cas, the confusion of the attentiveness (82 cases) and the epileptic crises (73 cases). This procession of signs seems to us frequently faithful in the clinical picture of cerebral toxoplasmosis as show of it the results of several authors [4; 5]

The CT scan revealed hypodense abnormality in the brain parenchyma, with a peripheral ring contrast in 66,7 % of the cases (figure 3), hypodensity without enhancement by the contrast in 29,5 %; and ischemic lesions were found in 3,8 % of the cases attributed to vascularites. These figures are found in most of our bibliographical references [6; 7]. The ct scan lesions were single (50, 6 %) or multiple (46, 8 %). The single ones prevailed (64, 8 %) in the series of DEKI in Côte d'Ivoire [1], and also in the study of AGODA-KOUSSEMA and al (44,1 %) in Togo [8]

The anemia (72, 2 % of the cases) found at certain patients was inflammatory and the leucopenia 25,5 %, are proofs of the immunodepression [9; 1;10]. The rate of CD4, a major indicator of the appreciation of the degree of immunodepression is lower than 200 cell / mm³ in 88, 9% of cases.

All our patients received cotrimoxazole treatment (100 % of the cases). The satisfactory immediate answer at all the patients testifies not only of the efficiency known for the cotrimoxazole. The clinical evolution was favorable in 60, 4 % of the cases. This rate is comparable to that of the SOUKSOUNA [10] and ASSI [11] who obtained 72 % of cure. The long-term preview bases on the evolution of the infection HIV / AIDS and the association in the other opportunist infections. However the addition of the ARV improves the survival of these patients.

Conclusion

In our country, toxoplasmosis remains the first opportunist infection of the central nervous system during the AIDS in spite of the institution of the preventive treatments. Diagnosis is based on: clinical and radiological arguments, associates with rapid and excellent response to etiological treatment. The cotrimoxazole is the treatment of choice in Africa and particularly in Ivory Coast. Cotrimoxazole prophylaxis and antiretroviral therapy remains the treatment of adequate prevention.

Board I: Main Demographic Characteristics of the Patients

| Demographic characteristics | Percentages (%) | |
|-----------------------------|--------------------------------------|--------|
| Sex | Male | 37,3 % |
| | Féminine | 62,7 % |
| Age | 15-19 | 1,4 % |
| | 20-55 | 90,6 % |
| | 56-81 | 8 % |
| Profession | Pupils and studying | 5,2% |
| | Private sector | 5,7% |
| | Public sector | 13,2% |
| | Informal sector | 35,4% |
| | Housewives and unemployed profession | 40,5% |

Board II: Neurological Signs and Their Frequency

| Neurological signs | Frequency | Percentages |
|--------------------------|-----------|-------------|
| Headaches | 163 | 76,9 |
| Motor deficit | 151 | 71,2 |
| Disorder of vigilance | 82 | 38,7 |
| Seizures | 73 | 34,4 |
| Psychological trouble | 45 | 21,2 |
| Disorder of language | 31 | 14,6 |
| Disorder of sensibility | 17 | 8 |
| Damage of cranial nerves | 11 | 5,2 |

Figure 1: Immunological Characteristics of the Patients

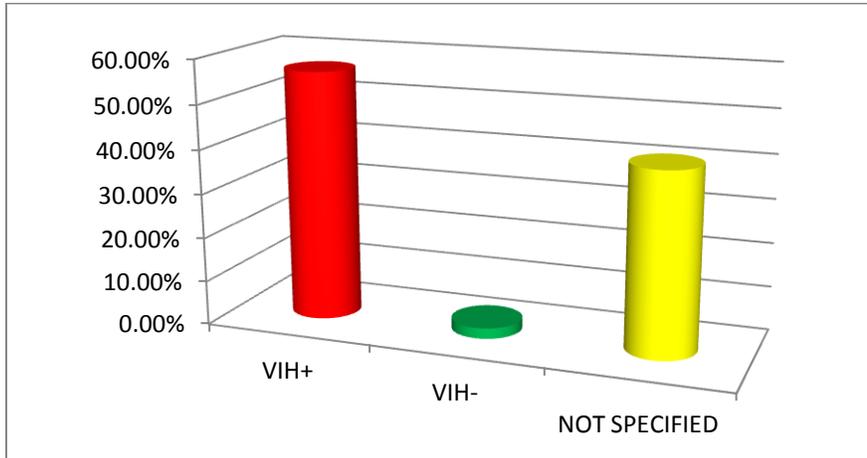


Figure 2: Evolutionary Profile in the Course of Hospitalization

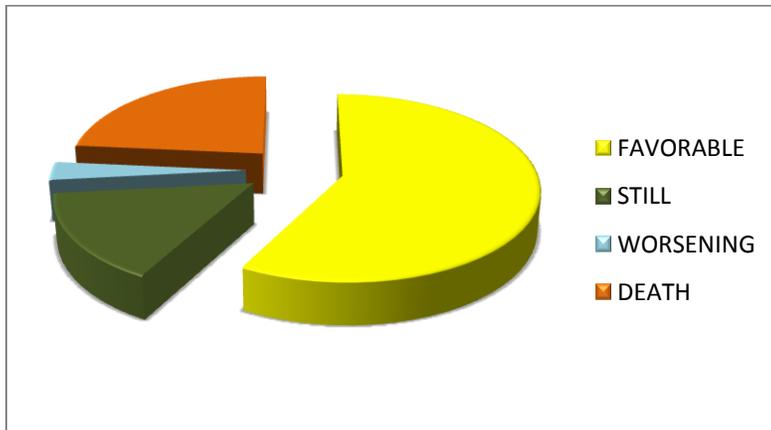


Figure 3: CT scan : Left Single Deep Abscess with Large Mass Effect



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