



Miliary Tuberculosis at Bujumbura Anti-tuberculosis Center. Retrospective study of 35 cases.

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Abstract

Aim : *To determine the epidemiological, clinical, radiological, therapeutic and evolutionary aspects of miliary tuberculosis in Bujumbura.*

Patients and Methods: *This was a retrospective study conducted from 1 January to 31 December 2016 at the Anti- Tuberculosis Center in Bujumbura. The study population consisted of patients with signs of tuberculosis impregnation and a description of radiological images compatible with miliary tuberculosis.*

Results: *During this period, we collected 35 cases of miliary tuberculosis out of 862 cases of pulmonary tuberculosis, i.e. a frequency of 4.1 % of pulmonary tuberculosis and 3.1 % of all forms of tuberculosis. Males were the most represented with a sex ratio of 1.26 in favour of males. The age group of 15-30 years was the most represented; the average age was 40.77 years with extremes of 17 and 75 years. Fever, cough, asthenia, weight loss, anorexia, night sweats, dyspnea, hemoptysis and chest pain representing respectively 86%, 94%, 26%, 80%, 31%, 51%, 3%, 9%, 77% of the cases were functional signs found in these patients. HIV seropositivity was present in 34% of cases, i.e. 12 patients, 6 of whom were women and 6 men. Radiologically, the miliary was mostly micronodular with 80% followed by a reticulo-nodular image with 20%. The evolution was good in the majority of cases (97%) with only one death.*

Conclusion: *Miliary tuberculosis is a therapeutic emergency whose delay in treatment can be life-threatening. It mainly affects young adult males. Strengthening health education and the fight against the HIV/AIDS pandemic will certainly help to reduce this incidence and limit its complications.*

Key words: *Miliary tuberculosis , epidemiology, clinical manifestation, evolution*

Introduction

Tuberculosis remains a major public health problem. According to the WHO, in 2016 there were 10.4 million new cases of tuberculosis worldwide and 1.7 million deaths [1]. After a primary infection, the vast majority of infected individuals remain in a tuberculosis-infected state and only 10% of those infected with the tubercle bacillus will develop tuberculosis disease [2]. If immunosuppression occurs,

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the risk of developing disease is high. This risk is estimated at 10% per year in the case of TB and HIV co-infection [3]. Tuberculosis miliaria is an increasingly rare form (2% to 8%), defined by the haematogenous or lymphatic dissemination of the tuberculosis bacillus from a pulmonary or extrapulmonary focus, but which is still serious and can lead to acute respiratory failure due to pulmonary oedema. The diagnosis of miliary tuberculosis is generally made by the radiographic image showing diffuse micronodular opacities in both lung fields, associated or not with a positive bacilloscopy[3,8,9,10]. Our study aimed to investigate the epidemiological, clinical, therapeutic and evolutionary aspects of miliary tuberculosis in Bujumbura.

Patients and methods

This was a retrospective study conducted from 1 January to 31 December 2016 at the Bujumbura Tuberculosis Centre (CATB) . The study population consisted of patients with signs of tuberculosis impregnation and a description of radiological images compatible with miliary tuberculosis . The information collected concerned sociodemographic, clinical, radiological and evolutionary aspects. It was entered and analysed using Microsoft and epi-info 7 software.

Results

During this period, we collected 35 cases of miliary tuberculosis out of 862 cases of pulmonary tuberculosis, i.e. a frequency of 4.1% of pulmonary tuberculosis and 3.1% of all forms of tuberculosis. Males were the most represented with a sex ratio of 1.26 in favour of males. The age group 15-30 years was the most represented; the average age was 40.77 years with extremes of 17 and 75 years. Fever, cough, asthenia, weight loss, anorexia, night sweats, dyspnoea, haemoptysis and chest pain representing respectively 86%, 94%, 26%, 80%, 31%, 51%, 3%, 9%, 77% of the cases were functional signs found in these patients. HIV seropositivity was present in 34% of cases, i.e. 12 patients, 6 of whom were women and 6 men. Radiologically, the miliary was mostly micronodular with 80% followed by a reticulo-nodular image with 20%. The evolution was good in the majority of cases (97%) with only one death.

Figure 1: Distribution of patients by age group

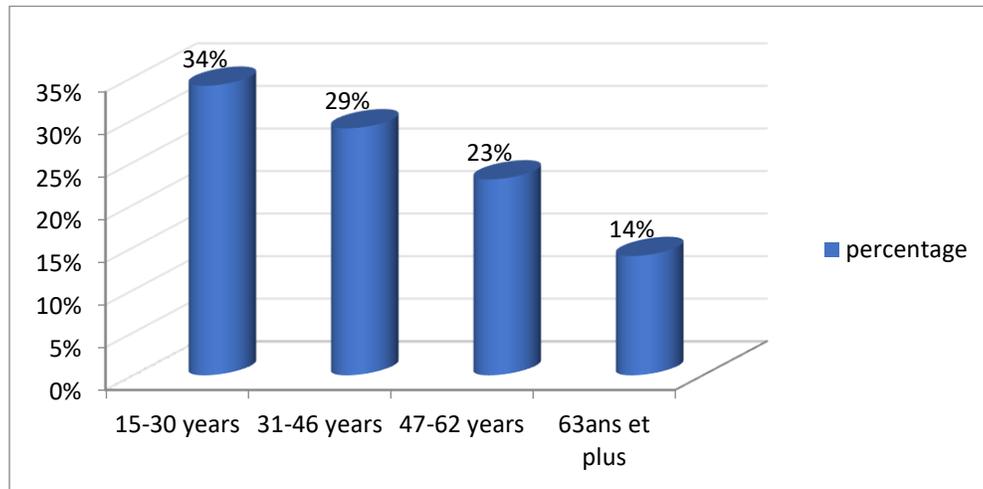
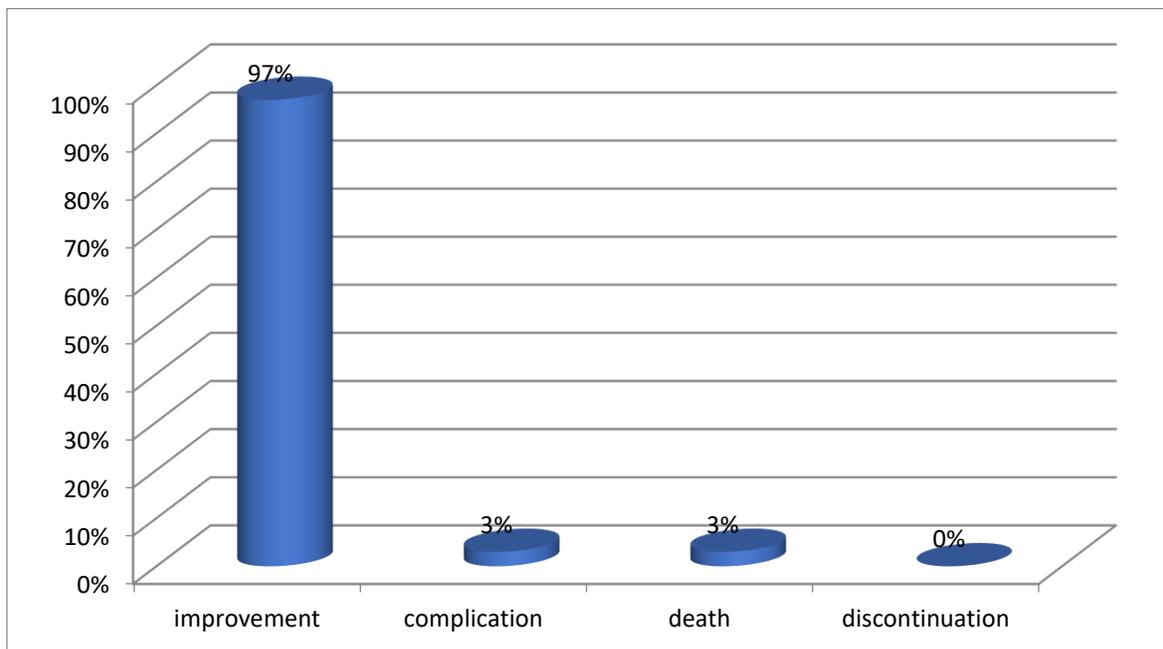


Figure 2: Distribution of patients by outcome



Discussion

In our study, miliary tuberculosis represented 3.1% of all tuberculosis and 4.1% of pulmonary tuberculosis. Our rate is higher than those reported by Kayantao et al [4] in Mali in 1999 who found that miliary tuberculosis represented 2.40% of all pulmonary tuberculosis and 1.78% of all tuberculosis, but lower than that reported by Ouedraogo et al [5] in Burkina-Faso in 2000 who found that miliary tuberculosis represented 5.21% of all pulmonary tuberculosis. The male sex was the most represented with 23 patients, i.e. 66% of cases with a sex ratio of 1.26 in favour of men.

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Our result is consistent with that of Kayantao et al [4] which was 65.47% male and 34.53% female. The age group 15-30 years was the most represented with 12 patients, i.e. 34% of the cases; the mean age was 40.77 years with extremes of 17 and 75 years. Our results are similar to those of Ouedraogo et al [5] in Burkina Faso who found an average age of 36.05 years with extremes of 3 months and 80 years, and a maximum frequency of patients in the 20-39 year old age group with 58.07%. Our results, as well as those of recent studies [5] show that miliaria is today a pathology of the young adult. This situation could be explained by the HIV-AIDS pandemic, which affects young people with predilection. In our study, the most common signs were cough (94%), fever (86%), weight loss (80%), chest pain (77%), night sweats (51%) and anorexia (31%). Our results are similar to those of Ouedraogo et al [5] who found cough (100%), fever (97.7%), weight loss (91%), anorexia (79.5%), chest pain (57%) and Hounkpati et al [6] who found a clinical picture dominated by : fever (100%), weight loss (100%), anorexia (82.5%), chest pain (75%), and asthenia (70%). It can be concluded that there are 3 most represented signs in our research (4, 5, 48): cough, fever and weight loss.

The miliary was mostly micronodular with 28 patients or 80% followed by a reticulo-nodular image with 20% or 7 patients and macro nodular in 0%. Our rate was higher for the micronodular type but much lower for the macro nodular type than those reported by Tonfak Temgoua [7] in Mali in 2009 who had found the micronodular type at 70.6%, macro nodular at 29.4%, Ouedraogo et al [5] who found the micronodular type at 66%, macro nodular at 34% and Folquet et al [49] who found micronodular images in 74.16% of cases, macro nodular in 19.10% of cases and reticulonodular in 6.74% of cases HIV seropositivity was present in 34% of cases, i.e. 12 patients, 6 of whom were women and 6 men. Our results are superior to those of Tonfak Temgoua [7] in Mali in 2009 who found seropositivity in 11.76% of cases. On the therapeutic and evolutionary level, the evolution was good in the majority of cases (97%) with only one death. Our results are different from those reported by Tonfak Temgoua [7] in Mali in 2009 who found 56% of the cases to have a good evolution and 41.2% of the cases to have died.

Conclusion

Miliary tuberculosis is a therapeutic emergency whose delay in treatment can be life threatening. It mainly affects young adult males. Strengthening health education and the fight against the HIV/AIDS pandemic will certainly help to reduce this incidence and limit its complications.

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