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Short Communication

Extra-Pulmonary Pseudo-Tumoral Tuberculosis in Pathological Anatomy: About 39 Cases at Souro Sanou Teaching Hospital in Bobo Dioulasso

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Abstract

Baground: The frequency of organs affected by extra-pulmonary tuberculosis (EPT) varies according to the methodology and the medical specialty of the authors. In this paper we present the cases received in pathological anatomy, where the indication is dominated by the exploration of a tumor syndrome.

Methodology: This involved the analysis of a retrospective cohort of 39 EPT cases in the only pathology anatomy unit in the Bobo Dioulasso area. Over a period of 4 years (2014-2017), we included all cases of extra-pulmonary tuberculosis diagnosed by histology using the standard technique, positive or negative Zihel-Neelsen staining.

Results: All cases collected give a hospital frequency of about 10 cases per year. The female sex was predominant with 28 women against 11 men, with a sex ratio between women and men of 2.54. The average age was 27.65 years, with extremes of 3 to 66 years. Ziehl-Neelsen staining was positive in only 6 cases (15.39%). The localizations identified were lymph node (53.84%), genito-mammary (23.08%), osteo-articular (12.83%) and digestive (10.25%). Genito-mammary involvement was present in the breast, cervix and trunk. Cervical lymphadenopathy was the main clinical symptomatology

Conclusion: EPT is not so rare, but difficult to diagnose; it is therefore under diagnosed in our context, showing the importance of training. improving the means of investigation and multidisciplinary collaboration keeps its place for better management

ABBREVIATIONS

EPT: Extra pulmonary Tuberculosis; HIV; Human Immunodeficiency Virus

INTRODUCTION

Extra-pulmonary tuberculosis (EPT) is defined as any infection with *Mycobacterium tuberculosis* or more rarely *Mycobacterium*

bovis or *Mycobacterium africanum*, affecting an organ other than the lung parenchyma [1]. Despite their high frequency in direct relation to the frequency of bacilliform pulmonary forms of this disease, EPT remains under-diagnosed in developing countries. The diagnosis of tuberculosis is based on the identification of the bacillus. This situation is rare in EPT, and the therapeutic decision is made on a bundle of arguments in which histology takes an important place. We report here the cases diagnosed in our department, to contribute to the knowledge of the problem posed by this disease in our country.

METHODOLOGY

This was a descriptive study on the cases of extra-pulmonary tuberculosis diagnosed in the department of pathological anatomy, the only laboratory in the health region of Bobo Dioulasso that covers a population of about 5 million peoples. The study was conducted over a period of 4 years (2014 - 2017). The histological diagnosis was made on a histological section using the standard technique (paraffin embedding and haematin-eosin-saffron staining), combined with Ziehl-Neelsen staining.

RESULTS

Global data

Out of approximately 1600 samples examined each year during the study period, we observed a total of 39 cases of extra-pulmonary tuberculosis, with an average annual hospital frequency of 9.75 cases per year. We observed a female predominance with 28 women (72%) against 11 men (28%), with a sex ratio between women and men of 2.54. All age groups were concerned. The average age was 27.65 years, with extremes of 3 to 66 years.

The location

Five EPT sites were identified in our study; lymph node location was predominant with 52.94% of cases, as shown in Table 1-3.

DISCUSSION

Global data

Tuberculosis remains an endemic disease in Africa despite the multiple efforts of States to fight. In 4 years, 39 cases of EPT were diagnosed in our department, which covers a population of about 5 million peoples. The relative rarity of EPT has been described in the literature; however, this figure would be well below the true extent of the disease. In our series, the mode of recruitment constitutes an important bias; indeed, the lack of symptoms suggestive of biopsy, the difficult access to anatomopathological examination and the insufficiency of technical means in the laboratory could explain this under diagnosis. The National Tuberculosis Control Program in Burkina Faso estimated that 5594 new cases of all types of tuberculosis were reported in 2015 [2]. Other larger annual figures have been reported in Afghanistan [3].

Table 1: Cases distribution according to the location.

Location	Number	Percentage (%)
Lymph node	21	53.84
Genital-mammary	9	23.08
Oteo-articular	5	12.83
Digestive	4	10.25
Total	**39**	**100.00**

The female sex was most affected by tuberculous lymphadenopathy with 55.56% of cases. The cervical seat was predominant with 72.22%.

Table 2: Distribution of lymph node tuberculosis according to the seat.

Seat	Number
Neck	15
Axilla	2
Groin	2
mesentery	2
Total	**21**

The cervix and the breast were the most affected organs of genital-mammary TEP

Table 3: Distribution of genital-mammary EPT according to the seat.

Seat	Number
Breast	4
Cervix	4
Uterine horn	1
Total	**9**

In our study, EPT was a disease of the young female subject. This is a piece of literature and many works [3].

The location

Our study found five seats with the neck lymph node predominant. Theoretically, any organ or tissue can be the site of a tuberculous infection. The frequency of organs affected by extra-pulmonary tuberculosis varies according to the methodology and the medical specialty of the authors of the series. However, the predominance of lymph node location is widely reported [3,4]. The number of unusual locations have seen increasing in Africa since the advent of HIV-AIDS [5,6]. Our series finds rare locations such as the cervix and the uterine horn (Figure 2). However, the number of locations identified in our study is lower than that of Kabul study, which finds rare locations such as the central nervous system [3]. Our methodology could explain that; indeed, clinical studies conducted in our context report locations not listed in our study [7,8].

The anatomopathological diagnosis

The samples received in pathological anatomy are often indicated for tumor syndrome or ulceration (Figure 1); indeed, the obsession with cancer in recent years has favored the practice of biopsies of suspicious lesions.

On the other hand, pathological anatomy is a frequent use in the diagnosis of EPT because of the frequency of non-contributory microbiological examinations. In fact, because of the aerobic nature of the tuberculous mycobacteria, the EPT lesions are paucibacillary, and often lead to negative examination of the biological samples. In pathological anatomy, the observation of the histological typical lesion of epithelio-giganto-cellular granuloma with necrosis, surrounded by a coat of mononuclear cells is sufficient to make the diagnosis of tuberculosis (Figures 3, 4). In addition, the detection of tuberculous bacilli on histological section is necessary in case of non-typical histological lesion.

Unfortunately, non-typical lesions have increased in frequency with the advent of HIV-AIDS; on immunocompromised soil, the inflammatory granulomatous reaction is incomplete, making histological diagnosis difficult. Hence the need for more advanced techniques such as PCR or even molecular biology.

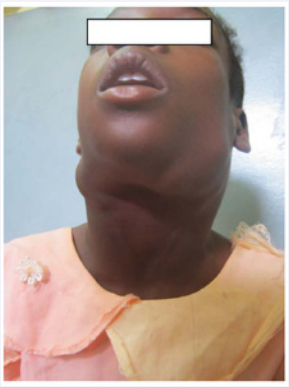

Figure 1 Lymph node tuberculosis; neck tuberculous lymphadenopathy. Source: ORL Unit, Sourô Sanou Teaching Hospital of Bobo Dioulasso.

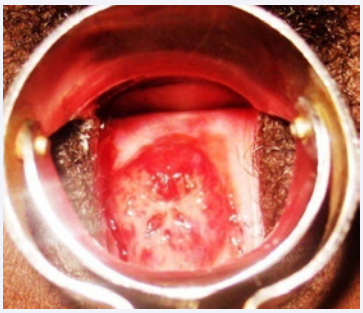

Figure 2 Cervix tuberculosis; exo-cervix ulceration. Source: Gynecology Unit, Sourô Sanou Teaching Hospital of Bobo Dioulasso.

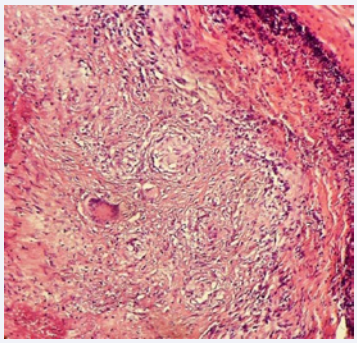

Figure 3 Histological aspect of lymph node tuberculosis; epithelioid and giant cell granuloma combined to necrosis. Source: Pathology Unit, Sourô Sanou Teaching Hospital of Bobo Dioulasso.

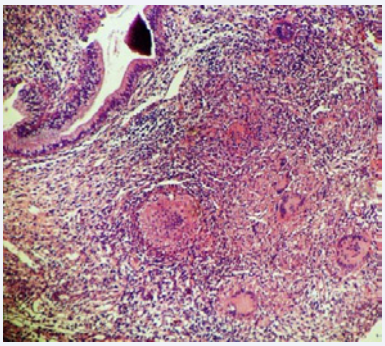

Figure 4 Histological aspect of cervix tuberculosis; epithelioid and giant cell granuloma. Source: Pathology Unit, Sourô Sanou Teaching Hospital of Bobo Dioulasso.

CONCLUSION

Our study aims to contribute to the knowledge about the extent of EPT and the difficulties of its management. About ten cases are diagnosed each year in our department. In our study, EPT is a disease of the young female subject. Rare localizations such as cervix and uterine horn have been identified. EPT is not so rare, but difficult to diagnose. This shows the importance of continuing train, the enhancement of the means of investigation and the multidisciplinary collaboration for a better support.

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Cite this article

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