



Medicine and Medical Sciences (LRJMSS) ISSN: 2354-323X Vol. 3 issue 6 pp. 037-039, June, 2016
Available online <http://www.landmarkresearchjournals.org/lrjmms/index.php>
INDEXING: ISI Impact Factor (IF)=1.264; Scopus; Index Copernicus.
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Case Report

Tuberculosis and Enteroparasitosis: A Case Report

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Accepted 11 April, 2016

The intestinal parasites interfere in nutritional and immune status, causing secondary infections, such as *Mycobacterium tuberculosis*. This case report of a patient who presented *Entamoeba histolytica*/E. dispar, *Ascaris lumbricoides* and tuberculosis. It was accompanied by routine screening, history and physical examination. Female patient, 46 year old, complained of pain in the neck and weight loss, showed negative for VDRL and HIV 1 and 2, clinical pathology of the amygdala and hypopharynx injury with chronic granulomatous inflammation tuberculoide. After the start of treatment reported constipation, abdominal pain, nausea. She was referred to state reference being treated with metronidazole, closed with high cure.

Keywords: Enteroparasites, tuberculosis, coinfection.

INTRODUCTION

The disease caused by *Mycobacterium tuberculosis* is a pandemic of importance to public health, it is estimated that one third of the world's population is infected (WHO 2015) in this parameter, Brazil is among the 22 priority countries with high rates and a greater need for combat, control and future eradication of tuberculosis (TB) (WHO 2009) Among the federal units, has been the highlight for two states in the Southeast, São Paulo and Rio de Janeiro have the highest absolute number of cases and higher incidence rate respectively (Ministério da Saúde Brasil 2011), however, the state of Espírito Santo (ES) has 08 priority municipalities with regard to this disease, and São Mateus (18°42'58"S, 39°51'32"W) (Oliveira 1992), located in the north of the state, is one of 315 municipalities comprising 70% of cases in the territory nacional (Oliveira 1992., Moreira and Maciel 2008).

The transition between the incubation period for clinical TB disease occurs when there immunosuppression

(Ducati et al., 2006), this fact can occur by several factors, among them is infection by parasites that affects the nutritional status leading to alteration of the immune system and favoring secondary bacterial infections (Wady et al., 2004). In this case report took place in São Mateus/ES and the patient was infected with *M. tuberculosis*, *Entamoeba histolytica*/E. dispar and *Ascaris lumbricoides*.

Case Report

Female patient with 46-year-old servant of a Basic Health Unit in São Mateus, Espírito Santo state, Brazil, for more than 10 years. The initial clinical complaint was weight loss and ulcerated lesion in the amygdala and hypopharynx, initial diagnosis was tumor or chronic inflammation.

The pathology report of biopsy specimen was obtained through fragments by various microscopy paraffin blocks: 01 (total inclusion), with hematoxylin/eosin, Wade and Grocott; having the macroscopic report the number five

fragments 19x7x5mm sized, irregularly shaped, of brown color, firm and elastic consistency, with no special features. But the microscopic report presented by histological squamous mucosa, the mucosa-associated lymphoid tissue and minor salivary glands with a chronic granulomatous inflammation tuberculoid, which is the diagnostic impression. Discrete foci of necrosis, not observing fungi.

As standardized initial measurement, sputum smear microscopy was performed, showing positive for both samples taken every other day, being notified as a new case with the clinical form of pulmonary tuberculosis and extrapulmonary laryngeal. The HIV1 and HIV2 tests showed non-reactive and non-reactive VDRL.

After starting treatment with the basic outline of TB (ICD-A15.9) with rifampicine, isoniazid, ethambutol and pyrazinamide in November 2013, routine tests were requested, presenting the material blood, red cells: 3.80 million/mm³; hemoglobin: 10.5 g/dL; hematocrit: 32.3%; VCM: 85.0 µ³; HCM: 27.6 pg; MCHC: 32.5 g/dL; total leukocytes: 10,400/mm³; 0% blasts, promyelocytes, myelocytes, metamyelocytes and atypical lymphocytes; 02% rods; segmented: 64%; Eosinophils: 07%; Lymphocytes: 23%; monocytes: 04%; platelet count: 443,000/mm³; for creatinine measurement method by Kinetic Jaffet: 0.70 mg/dL; dosage alkaline phosphatase by the kinetic method: 103.0 U/L; Glutamic oxalacetic transaminase by the method Kinetic Optimized: 52 U/L; Glutamic pyruvic transaminase by Kinetic Optimized methods: 43 U/L; dosage urea method modified by Berthelo 27 mg/dL; by the colorimetric method of the total bilirubin showed: 0.9 mg/dL; direct bilirubin: 0.3 mg/dL; Indirect bilirubin: 0.6 mg/dL.

Analyzing urine, the appearance was clear, yellow citrus; reaction pH: 6.5; density: 1015; without the presence of abnormal elements; the sediment had 06 epithelial cells per field; 01 red blood cells; 05 leukocytes per field; moderate flora; mucus +; absent for cylinders and crystals. The stool test held by Faust methods, Ritchie, Bermann and Hoffman had to Protozoa: cysts of *Entamoeba histolytica*/*E. dispar*; and helminths: *Ascaris lumbricoides* eggs.

After one week of treatment, the patient gained 05 kilos of body weight, but reported nausea, abdominal pain, constipation and malaise. Complementary tests were ordered because of mild anemia, with serum iron through the colorimetric method: 22.0 mg/dL; C-reactive protein by immunoturbidimetry method: 173.8 mg/L, erythrocyte sedimentation rate by Westergren method: 84 mm/h.

Due to the persistent malaise and positive stool test, the patient was referred to state reference, which was prescribed 04 ampoules of Noripurum®, 02 tablets of folic acid for 15 days and metronidazole 400 mg, 02 lengths of twelve hours a total of ten tablets.

The six monthly basiloscopias were negative, the situation of the ninth month was negative, there was no

record of communicating, or of comorbidities, and ended the treatment with healing in June 2014.

DISCUSSION

The intestinal parasites in women of 41-50 years is approximately 3.9% (Costa et al., 2012), but already compared to TB, it is related to occupational diseases related to biological, chemical and environmental hazards exposed daily to work in a unit health without the use of strict biosecurity protocols, favoring the emergence of TB in people who work in the area of health (Silva and Navarro 2013).

A study in an indigenous village in the Brazilian Amazon region showed that tuberculosis and intestinal parasites are common conditions being found *Entamoeba histolytica*/*dispar* at 35.4% followed by 19.3% with *Ascaris lumbricoides* (Bóia et al., 2009). Another survey conducted in Rio de Janeiro shows that of the 327 cases analyzed with tuberculosis, and 38.2% female, 33.9% above 46 years, 19.6% had intestinal parasites, and meeting 3.0% of *E. histolytica*, and only 07 cases polyparasitism, it still asserts the importance of treatment of parasites, especially helminths, before the start of bacterial treatment (Neto et al., 2009).

The helminth infections can be one of the risk factors for the development of TB, this information may suggest simultaneous treatment control of helminths and investigation of latent tuberculosis infection (LTBI) and conducting to make chemoprophylaxis (Albanese et al., 2015), besides factor risk, parasitic infection and TB is suggested to change in some serum levels (Ministério da Saúde Brasil 2011., Neto et al., 2009).

This case shows the possible severe complications of TB treatment due to co-infections not HIV, although not common, but there are cases of intestinal parasites and TB, requiring monitoring and treatment prior or concomitant treatment of mycobacteria. Thus, professionals should be aware of such symptomatology and comorbidity, as Brazil is among the countries with the highest TB rates and high rates of infection by intestinal parasites and can cause severe complications if not treated properly and/or timely.

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