## Current status of imaging diagnosis of musculoskeletal involvement in tropical diseases

O estado atual do diagnóstico por imagem no acometimento musculoesquelético pelas infecções

tropicais

## Marcelo Bordalo Rodrigues<sup>1</sup>

The so called "tropical" infections are those typically found in the regions between the tropics of Cancer and Capricorn. In the past, such infections were found in the temperate zones of the earth. Examples to be mentioned include the Black Death occurred in Europe in the middle ages, and also ancylostomiasis and malaria, in the United States of America, early in the 20th century<sup>(1)</sup>. It is important to observe that such infections were not related to climate conditions, but rather to poor sanitary conditions and low education levels, besides the difficult access to medications at those past times.

The term "tropical infection" was coined in the current times as most of the developing and underdeveloped countries of the globe are located in tropical zones. Such countries present variable levels of difficulty in the management of the general population conditions including hygiene, education and access to healthcare, so that the development of tropical infections is more frequent, with higher rates of associated morbimortality.

The imaging diagnosis constitutes a relevant instrument in the primary care and specific diagnosis of tropical infections, particularly in the evaluation of the degree of target organs involvement. On the other hand, the limited availability or inappropriate conditions of imaging apparatuses in tropical countries constitute other relevant issues to be addressed <sup>(2)</sup>. Thus, in such countries, the diagnostic reliability remains low.

Paracoccidioidomycosis is a typical infection in Brazil, reaching endemic levels in the Southern, Southeastern and Middle Western regions of the country<sup>(1,3)</sup>. Pulmonary compromise is the classical manifestation of the disease. On the other hand, the musculoskeletal compromise by the *Paracoccidioides brasiliensis* is rarely found with few cases reported in the literature<sup>(1,4–6)</sup>. However, there is no original study approaching this specific form of bone mycosis. In fact, as a kind of *mea culpa* we must admit that this "gap" in the literature is a our responsibility – Brazilian researchers –, considering that paracoccidioidomycosis is much more common in Brazil.

In the past issue of **Radiologia Brasileira**, Lima Júnior et al.<sup>(7)</sup> fulfilled this gap by publishing an interesting study describing computed tomography findings of paracoccidioidomycosis in the musculoskeletal system. The authors have demonstrated that the disease manifests either by single or multiple well defined lytic lesions with a thin sclerotic halo, preferentially affecting the appendicular skeleton. In their study, bone sequestrum was not a frequent finding and most patients presented with osteoarticular symptoms. The authors also propose that the presence of computed tomography findings of such lesions in patients who live or have been in endemic regions should lead to the inclusion of paracoccidioidomycosis in the differential diagnosis of bone lytic lesions.

We wish that the mentioned study may be the first of a series to approach imaging findings, aiming at a better understanding and more accurate diagnosis of a condition which, although rare, is typical and endemic in our country.

## REFERENCES

- 1. Peh WCG. Tropical and unusual infections of the musculoskeletal system. Semin Musculoskelet Radiol. 2011;15:439–40.
- Ng KH, McLean ID. Diagnostic radiology in the tropics: technical considerations. Semin Musculoskelet Radiol. 2011;15:441–5.
- Shikanai-Yasuda MA, Telles Filho FQ, Mendes RP, et al. Consenso em paracoccidioidomicose. Rev Soc Bras Med Trop. 2006;39:297–310.
- Marchiori E, Dalston M, Zanetti G, et al. Paracoccidioidomycosis: another cause of sternal osteomyelitis. Joint Bone Spine. 2012;79:323–4.
- Valera ET, Mori BM, Engel EE, et al. Fungal infection by Paracoccidioides brasiliensis mimicking bone tumor. Pediatr Blood Cancer. 2008;50:1284–6.
- de Freitas RS, Dantas KC, Garcia RS, et al. Paracoccidioides brasiliensis causing a rib lesion in an adult AIDS patient. Hum Pathol. 2010;41:1350–4.
- Lima Júnior FVA, Savarese LG, Monsignore LM, et al. Aspectos de imagem da paracoccidioidomicose osteoarticular na avaliação por tomografia computadorizada. Radiol Bras. 2015;48:1–6.

<sup>1.</sup> MD, Physician Responsible for the Unit of Musculoskeletal Radiology – Instituto de Radiologia do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (InRad/HC-FMUSP), Coordinator for the Unit of Musculoskeletal Radiology – Hospital Sírio-Libanês, São Paulo, SP, Brazil. E-mail: bordalo.m@gmail.com.