ISHAM Working Group on *Chromoblastomycosis*

Chromoblastomycosis is a member of the heterogeneous group of subcutaneous mycoses presenting several types of chronic skin lesions at the site of a transcutaneous trauma. The disease is considered an occupational disease in many tropical and temperate Countries and is usually associated to several types of agricultural activities. Its geographical distribution include the rural zones of South and Central America, Madagascar, Australia and being increasing observed in Asiatic countries. This disease greatly impairs social functioning of the person, particularly with chronic infection, eventually leading to an inability to carry out normal activities. Diagnostic techniques are based on direct examination, culture and histopathology. Several new, morphologically similar agents of the disease have been discovered leading to the introduction of molecular techniques for accurate fungal identification. In addition, molecular methods enable to establish a real connection between environmental strains that are inoculated into the patient and are responsible for the development of chromoblastomycosis. Routes and sources of infection need to be taken into in account in combating disease, which may have an incidence as high as 16:1000 in endemic areas.

If the diagnosis is delayed, antifungal therapy may be long and relapses are often observed. Little is known about the the *in vitro* susceptibility of these organisms and the correlation of these tests with the clinical outcome as well as if the dense tissue fibrosis my impair the fungicidal or fungistatic tissue level of the antifungal drugs.

There are many questions that remain to be answered or need more studies to elucidate the real situation as:

* Are environmental and clinical strains representing the same species?
* What is the more frequent species caused this disease?
* Is the clinical syndrome variable depending on the endemic area?
* Is the clinical syndrome variable depending on the body site?
* Are more than one species involved in the same endemic area?
* Have the different species comparable virulence?
* Is virulence and invasive ability related with extremotolerance?

* What are the most appropriate techniques for diagnosis and identification of the involved species?
* What are the susceptibility *in vitro* profiles of these organisms and what is the relation with the clinical outcome during and after treatment?
* What is the best regimen of treatment?
* What is the incidence of malignization of the chromoblastomycosis lesions?
* What are the criteria for the interruption of therapy?

Currently there are some papers available about these questions, but most studies are case reports without worldwide conscience to address general questions concerning this disease. One of the reasons may be that most studies originate from clinicians working in rural endemic areas, covering just some practical aspects, or may have insufficient technical resources.

Since there are many aspects that need to be evaluated, the aim of this working group is to establish a worldwide network to cover different topics concerning to this disease. Major aim is to involve the local physicians mentioned above, and acquire and study their material with modern methods. The conveners of the Working Group are clinicians themselves, having more access to this specialized data and material than the Conveners of the Working Group on Black Yeasts.

We launch a joint meeting CBS next April, where important questions and tasks will be evaluated, and each member will be requested to find contacts in their country of origin. We expect participants from endemic areas in China, Polynesia, the Middle East and South America.

The aspects to be covered are: diagnosis, recollection of worldwide samples for *in vitro* testing with current and new antifungal drugs, evaluation of treatment protocols and their correlation with *in vitro* tests. About the latter point, the members in charge of patients and samples will receive a precise form in which specific data must be collected so that all data will include comparable parameters. Also ecology and evolution studies are being done, and identification of the species that are collected in the network. We will also search for contacts sampling environmental strains in endemic areas. Moreover, it would be interesting to reproduce the disease in an animal model and seek for the best drug, duration of treatment and the relation with the in vitro results; the feasibility of this type of research will be discussed.

We think that the study of this orphan disease will implicate a good advance in different aspects. Not all participating countries and labs have modern facilities, so the implementation of this network with the possibility to interchange data, materials and students or scientists will greatly advance international cooperation and communication.

Conveners and contact:

Roxana G. Vitale (Argentina)
rvitale@conicet.gov.ar

Flavio Queiroz-Telles (Brazil)
queiroz.telles@uol.com.br