

**TITLE:** OPTIMIZATION OF THE MYCOLOGICAL DIAGNOSIS IN THE LABORATORY OF MYCOLOGY AND EPIDEMIOLOGICAL ANALYSIS OF DERMATOMYCOSIS ATTENDED AT THE POSTO MÉDICO DE GUARNIÇÃO DE BELO HORIZONTE-MG.

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Cutaneous fungal infections compromise human health by interfering with the performance of daily tasks and sports. Although they are seen as aesthetic problems and are often neglected, without effective treatment and depending on the patient's immune status, they can progress to severe and invasive cases. The prevalence of these infections is increasing, mainly due to the increased incidence of immunodeficiencies and the age of the population. However, this increase is probably more accentuated than showed by epidemiological surveys, mainly due to the lack of mycological diagnosis. Therefore, the improvement of medical care, the increase in requests for mycological diagnosis, as well as the optimization of methodologies for the isolation and identification of fungi in clinical laboratories are essential to improve patient care and reduce costs related to the failure of empirical treatments. In this context, the aim of this study was to carry out an epidemiological study of cutaneous mycoses in outpatient care or by the Home Care service, reaffirming the importance of optimizing the diagnostic methods of dermatomycoses, performed at the Mycology Laboratory of the Posto Médico de Guarnição, in Belo Horizonte-MG. The employed methodology for the isolation and identification of fungal species was optimized, and from the anamnesis, the epidemiological profile related to age, gender, basic pathology, lesion location, result of the direct examination and culture was analyzed. Identification and phenotypic characterization of these fungal isolates were carried out from September 2019 to August 2020. It was observed 40% of positive cases of dermatophytosis, mainly tinea unguium, no difference was found in relation to gender, and the most affected age group was between 41 and 50 years. Frequency of the isolated species of dermatomycosis in positive cases was: 21% *Trichophyton mentagrophytes*, 15% *Trichophyton rubrum*, 13% *Candida albicans*, 4% non-dermatophytic dermatomycosis *Scytalidium dimidiatum*, 2% Pityriasis versicolor and 1% *Fusarium* spp. This study reaffirm that the proper and optimized routine service of mycological diagnosis is essential for clinical practice, generating a more accurate and reliable diagnosis for the patient, and in prescribing the appropriate treatment for each clinical case. In addition, epidemiological data may assist in delineating prophylactic strategies with an impact on the community.

**Keywords:** mycological diagnosis, dermatomycosis, epidemiology, Belo Horizonte.