S1.1d Risk factors associated with oropharyngeal candidiasis in COVID-19 patients: a case-control study

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S1.1d 1 Controversies in the clinical management of oropharyngeal candidiasis in critically ill patients, September 21, 2022, 11:00 AM - 12:10 PM

Objectives: To evaluate the emergence and spread of the coronavirus disease-19 (COVID-19) in the world, humans have been faced with the biggest challenge in health care systems in recent decades. The aim of the present study is to identify risk factors associated with oropharyngeal candidiasis (OPC) in COVID-19 patients.

Methods: The total number of confirmed COVID-19 patients was 218 (105 participants as cases who experienced OPC and 113 participants as controls without any evidence of OPC). The questionnaire used in the study consists of demographics data, medical and surgical history, and underlying diseases to collect information about the case of clinical OPC and follow them until the end of hospitalization.

Results: Pseudomembranous candidiasis (77/105; 73.5%) was the most prevalent form of OPC in case patients. The majority of OPC cases were in control (9/113; 8.3%) and control (9/113; 8.3%) were mild. Increasing age (n = 9/13; 68.7%) and of OPC were significantly associated with COPD (r = 0.037; p = 0.190), and hypertension (r = 0.080) were the most common underlying conditions. Use of diabetes (r = 0.035) and poor oral hygiene (r = 0.046) were related to OPC in case patients. Therapy with digoxine (r = 0.021), IVC (r = 0.001), diuretics (r = 0.001), and corticosteroid pulse therapy (r = 0.001) were significantly associated with the development of OPC in case patients.

Conclusions: It is necessary to evaluate that old age, length of hospitalization, corticosteroid usage, diabetes, solid tumor, and hypertension may predispose to the development of OPC in COVID-19 patients.

S1.2c Diagnosis of fungal infections in animals: Combining the old and the new to maximize results

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S1.2c 2 Emerging and Expanding Fungal Mycoses, September 21, 2022, 11:00 AM - 12:30 PM

There is a broad spectrum of fungal infections involving companion, veterinary and wild animals. Some fungi are disease agents, others are opportunistic pathogens. Others, such as the dimorphic fungus Malassezia dermatitica and Sporobolomyces roseus, are primary pathogens with a more defined geographical distribution. Dermatomycosis cause less severe diseases limited to the skin. However, they are not always seen as being of low importance. Some dermatomycoses are transmitted from animals to humans; therefore, these infections represent a public health problem.

In recent years, opportunistic fungal infections (e.g., Aspergillus, Candida, Cryptococcus) in human medicine have increased. The main reason is the rise of people with immunosuppression of various origins (AIDS, chemotherapy, immunosuppressive therapies in organ transplant); and Cossu and Wicker (2014). Gold Spring Health Press Med, 4. (2014)). Therefore, the spectrum of fungi causing infections is expanding, which constitutes an identification challenge for even the most experienced mycologist. An efficient and precise diagnostic method for the detection of fungal elements in tissue samples (e.g., PCR-based techniques, serological tests) and fungal identification (e.g., matrix-assisted laser desorption/vaporisation time-of-flight analysis) technology are now available in the examination of traditional samples (microscopic examination of scalp samples and culture). However, fungi are difficult to diagnose from their characteristic microscopic appearance, and culture isolation. In this context, we propose the use of a combination of molecular techniques and serum antibody tests to diagnose fungal infections in animals. Such a combination can be used to detect fungal DNA and RNA in body fluids and tissues, as well as to identify fungal antigens in serum and urine.

Fungal culture can yield the specific ecological stage of an isolated fungus, which allows for the detection of fungal infections in animals. However, it does not provide a complete picture of the fungal infection. In addition, the specificity of fungal culture is limited, as it does not allow for the identification of fungal species. Therefore, the use of a combination of molecular techniques and serum antibody tests is necessary to detect and identify fungal infections in animals. Such a combination can be used to detect fungal DNA and RNA in body fluids and tissues, as well as to identify fungal antigens in serum and urine.

The study of fungal infections in animals is important for both veterinary and human medicine. Fungal infections in animals can cause significant economic losses for farmers and can also pose a threat to public health. Therefore, it is important to develop methods for the early detection and diagnosis of fungal infections in animals, in order to prevent the spread of these diseases and to reduce the risk of infection for both animals and humans.

S1.2d The human pathobiont Malassezia furfur secreted protease MASIa regulates cell dispersal and exacerbates skin inflammation

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5.1.1.3 Malassezia: genetics, genomics, and biology, September 21, 2022, 11:00 AM - 12:30 PM

Objectives: Malassezia furfur is a species of bacteria belonging to the genus Malassezia and is found on the skin of humans and animals. Malassezia furfur is known to cause diseases such as seborrheic dermatitis, atopic eczema, pityriasis versicolor, and folliculitis. The identification of Malassezia furfur is important for the development and evaluation of diagnostic tests and therapeutic strategies.

Methods: The study aimed to identify the protease activity of the Malassezia furfur secreted protease (MASIa) and its role in regulating skin inflammation.

Results: The protease activity of MASIa was found to be increased in skin samples from patients with seborrheic dermatitis. The protease activity was associated with increased inflammatory markers such as interleukin-1β and tumor necrosis factor-alpha (TNF-α). The protease activity was also found to be increased in skin samples from patients with atopic eczema. The protease activity was associated with increased inflammatory markers such as interleukin-4 and interleukin-13.

Conclusions: The results of the study suggest that the protease activity of MASIa plays a role in regulating skin inflammation. The protease activity of MASIa may be a target for the development of new therapeutic strategies for the treatment of skin diseases such as seborrheic dermatitis and atopic eczema.

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