

POSTER 2

Pulmonary tuberculosis in animals from an anatomical point of view

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Doi: <https://doi.org/10.51126/revsalus.v4iSup.269>

Resumo

Introduction: Pulmonary tuberculosis is a zoonotic disease caused by the Mycobacterium tuberculosis family of bacteria in dogs, and Mycobacterium bovis in cattle or cats [1]. Animals can be infected by inhaling the infectious agent, often causing respiratory problems, or by bites causing skin granulomas [2]. The disease affects the lungs causing damage and lesions on these organs [2]. Variable clinical signs are observed, such as diarrhea or fever [2]. Thus, it is important to perform diagnostics to confirm that the animal has pulmonary tuberculosis [3]. **Objectives:** The purpose of this work is to correlate the anatomical features of the lungs with pulmonary tuberculosis in animals. **Methods:** literature revision. **Results:** The diagnoses can be antemortem or postmortem [3]. Scientists are still looking for a treatment

for pulmonary tuberculosis in animals to avoid euthanasia as much as possible. They are also studying in the search for new, more effective vaccines that can significantly reduce the disease [4]. Being a zoonotic disease, it is important to control and regulate this disease in the world by different epidemiological means, which can be sanitary or medical [4]. **Conclusions:** It is fundamental for researchers to know the pulmonary anatomy and the different specific variations in animals to succeed in finding potential treatments. Pulmonary tuberculosis is a disease with a high severity rate, especially in animals. Whether for the animal or human population, the awareness of the owners to vaccinate their animals and following the different diagnostic techniques to prevent the disease has a great influence on the control of the disease.

Keywords: pulmonary tuberculosis; zoonosis; animals; lungs; anatomical features.

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POSTER 3

Expression of cytokines in the omentum in inflammatory peritoneal processes

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Doi: <https://doi.org/10.51126/revsalus.v4iSup.270>

Resumo

Introduction: The peritoneal cavity is the seat of primary or secondary infectious and inflammatory processes. The omentum plays a crucial role in controlling these processes through specific cellular and molecular mechanisms. **Objectives:** To carry out a bibliographic review of the

literature to determine the state of the art on the inflammatory processes that occur in the omentum that lead to the formation of peritoneal blocks. **Material and Methods:** A bibliographic search was carried out on PubMed with the descriptors omental inflammation in peritoneum. Original

articles published between the years of 1990 and 2022, which met the inclusion criteria, having selected 5 out of 529 articles to constitute this abstract. **Results:** The immune response of the omentum to inflammation occurs by the “activation” of Milky Spots, which have macrophages and lymphocytes in various stages of maturation [1,2], in the presence of infection these cells leave via stomata from the connective tissue to the peritoneal cavity. [2,3]. Stromal cells expressing stem cell markers are a major source of angiogenesis factors such as endothelial growth factor which may be related to

its being used as a graft. [4]. Another reaction to omentum infection is the production of “host defense peptides”, which are part of the immune defense system [5], also playing a modulating role, stimulating the division of epithelial cells and fibroblasts, vascular neogenesis, granulation tissue formation and wound healing. **Conclusions:** There are modulating molecules in the omentum that are activated in the presence of an infectious/inflammatory process. Identifying this player is essential to control of inflammatory process.

Keywords: omentum; peritonitis; chemokines; peritoneum.

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POSTER 4

Psilocybin and psilocin as new tools to fight depression: an overview of the pharmacodynamics and pharmacokinetics

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Doi: <https://doi.org/10.51126/revsalus.v4iSup.271>

Resumo

Introduction: Psilocybin and psilocin are the main hallucinogenic compounds of the *Psilocybe* ssp. mushrooms, widely acknowledged as “magic mushrooms”. Preliminary studies with psilocybin show potential for the treatment of obsessive-compulsive disorders, alcohol and tobacco use disorders, major depressive disorder, and treatment of depression in terminal cancer patients [1]. Despite increasing awareness on the therapeutic potential of hallucinogens and revitalized interest in related investigation, their safety and usefulness have been debated and challenged in the medical literature [2]. **Objectives:** In this review, we compiled the available information on the mechanisms of action and pharmacokinetics (in particular metabolism) of psilocybin and psilocin, with special emphasis on their implications

for the therapeutic potential in depression. **Materials and Methods:** An extensive literature search was carried out in PubMed (U.S. National Library of Medicine) to find the most relevant articles dealing with the pharmacodynamics and pharmacokinetics of psilocybin and psilocin. **Results:** Psilocybin is believed to have very little biological activity per se, acting primarily as a pro-drug of psilocin. In fact, psilocybin is rapidly activated in vivo by dephosphorylation promoted by alkaline phosphatases, resulting in the production of psilocin, which further undergoes glucuronidation, with the psilocin-O-glucuronide metabolite being the main urinary biomarker of consumption, with relevance in clinical and forensic diagnosis [3]. No CYP450-mediated metabolism was unraveled for psilocybin or psilocin, making these