

TITLE: ANTIFUNGAL ACTIVITY IN VITRO OF NON-STEROID ANTI-INFLAMMATORY AGAINST *SPOROTHRIX SCHENCKII* COMPLEX.

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Sporotrichosis is a subcutaneous mycosis caused by dimorphic fungi of the *Sporothrix schenckii* complex, which is distributed worldwide with endemic areas. The emergence of resistant isolates presented major challenges to the treatment of infections caused by the *S. schenckii* complex. Therefore, it is necessary to seek new therapeutic strategies. Studies involving *Candida* spp., *Cryptococcus* spp. and *Trichosporon* spp. demonstrated that the association between non-steroid anti-inflammatory and antifungals represents a promising prospect for resistant isolates. Non steroidal anti-inflammatory drugs are widely used, especially as anti-inflammatory and analgesics. Non-steroid anti-inflammatory inhibit the cyclooxygenase isoenzymes COX-1 and COX-2, which are involved in the biosynthesis of mammalian prostaglandins. The objective of this study was to evaluate the *in vitro* efficacy of non-steroid anti-inflammatory (acetylsalicylic acid, ibuprofen and diclofenac sodium) against two clinically relevant species: *S. brasiliensis* and *S. schenckii sensu stricto*. The Minimum Inhibitory Concentration (MIC) against the 11 isolates of *Sporothrix* spp. was determined by the broth microdilution method according to the M38-A2 protocol of the Clinical and Laboratory Standards Institute (2008). Among the non-steroid anti-inflammatory, ibuprofen showed the best inhibitory effect, with nine isolates presenting MIC <1mg/mL, whereas acetylsalicylic acid showed activity between 1 and 8mg/mL and diclofenac sodium showed no activity to 8mg/mL. Thus, it is possible to observe that ibuprofen and acetylsalicylic acid represents a promising for the treatment of sporotrichosis. Therefore, it is intended to evaluate the interaction of the antifungals terbinafine and itraconazole to seek synergism between non-steroid anti-inflammatory and antifungals.

Keywords: *Sporothrix* spp., resistance, antifungals, ibuprofen, diclofenac sodium, acetylsalicylic acid.

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