Microbiological analysis of oral microbiota of nonpoisonous serpents on Acre, Amazon.

Reis, D.B.V.¹; Souza, M.B.¹; Carvalho, Y.K.¹; Medeiros, L.S¹

¹ UFAC – Universidade Federal do Acre (BR 364, Km 04 - Distrito industrial - CEP: 69.920-900 Rio Branco - AC)

Introduction: Amazon has the highest frequency of snakebites per resident. Usually it causes a secondary bacterial infection. Considering these effects, the aim of this study was to trace antimicrobial susceptibility from bacteria most frequently isolated from the oral microbiota of wild serpents. Material and methods: In a pilot study, were collected samples of three species of serpents from the ZooBotanical Park at the Federal University of Acre. A sterile swab was introduced and rubbed on the mouth's serpent for about 10 seconds. Then samples were plated on a petri dish with agar blood and petri dishes containing MacConkey agar, incubated under aerobic conditions at 37°C / 24h. The bacteriological characterization was carried out according to the macroscopic characteristics of the bacterial culture and conventional biochemical tests in presumptive media (Pessoa & Rugai and Kligler agar). The bacteria most frequently found in each sample were subjected to a susceptibility test with antimicrobials through a diffusion disk on Mueller Hinton agar, according to the Kirby-Bauer method. Results and discussion: On the Atractus sp. serpent, Enterobacter sp. was the most frequently isolate. This isolate was sensitive to polymyxin B, chloramphenicol, ampicillin + sulbactam, tetracycline, enrofloxacin and resistant to amoxicillin, rifampicin, bacitracin, penicillin and azithromycin. On the Chironius sp. serpent, Klebsiella sp. was the most frequently isolate, been sensitive to polymyxin B, chloramphenicol, enrofloxacin and rifampicin and resistant to ampicillin + sulbactam, tetracycline, amoxicillin and azithromycin. The sample collected from Coralushortulanussp serpent only produced one bacterial isolated, gram-negative non-fermenting bacteria, which was not identified by biochemical tests in this study. Conclusion: Preliminary results of the study can effectively contribute in the characterization of secondary bacterial infections to snakebites and on the future creation of protocols to assist victims.

Key words: Microbiota, antimicrobial susceptibility, nonpoisonous serpents.