headache, myalgia, nausea, and vomiting for 1-month at admission. He evolved with cough, dark urine, epigastralgia, and jaundice, in addition to a loss of 10 kg since the onset of the clinical picture. On physical examination, he was jaundiced, febrile, with a painful abdomen, with mild hepatomegaly, without other findings. Laboratory tests showed leukocytosis associated with significant eosinophilia (30,000 leukocytes/mm^3 and 21,000 eosinophils/mm^3). In addition, there was elevated bilirubin, at the expense of indirect bilirubin, with normocytic and normochromic anemia, elevated LDH, and significant reticulocytosis. Direct Coombs negative, as well as viral serologies for hepatitis A, B, and C, HIV, HTLV negative; syphilis, toxoplasmosis, and CMV also negative. Chest tomography showed multiple nodules with soft-tissue density scattered throughout the lungs, bilaterally, small pericardial effusion, and abdominal CT with hepatomegaly with periportal edema. The patient reported having gone fishing in a pond close to his house with friends, about 1 month before the onset of symptoms. Stool parasitological examination confirmed the presence of Schistosoma mansoni eggs. Treatment with praziquantel was started, with a decrease in leukocytes/eosinophils, improvement of anemia and hemolysis tests, and total resolution of all symptoms.

Discussion: Non-immune hemolytic anemia is not a typical presentation of acute S. mansoni infection. It is known that the parasite has an intense influence on the inflammatory cascade in the pathophysiology of the disease, which could trigger some degree of anemia; however, the expected pattern would be anemia of inflammation and not hemolysis. Other factors may have influenced the emergence of hemolysis, such as medication use, but the improvement of the condition with the initiation of treatment for Katayama syndrome is noteworthy.

Keywords: Katayama syndrome, Acute schistosomiasis, Non-immune hemolytic anemia, Differential diagnoses.

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THE RELEVANCE OF EPIDEMIOLOGICAL DIAGNOSIS IN THE INVESTIGATION OF SCHISTOSOMIASIS AND LEPTOSPIROSIS IN A RURAL AREA: CASE REPORT

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Introduction: Neglected infectious diseases, such as schistosomiasis and leptospirosis, represent a challenge to public health, especially in rural communities with poor sanitation and contact with contaminated water. Schistosomiasis, caused by trematodes of the genus Schistosoma, and leptospirosis, a systemic bacterial zoonosis caused by Leptospira spp., are transmitted through contact with contaminated water: the former via freshwater snails, the latter via the urine of infected mammals. Both are mandatorily notifiable, and although coinfections are rare, there is a risk of endemic outbreaks when there is an environmental focus.

Case description: Five patients, three men and two women (30 to 61 years), had contact with a lagoon in a rural area, a site with previous cases of schistosomiasis and leptospirosis among relatives. Three presented nonspecific symptoms: fever, headache, skin rash, night sweats, fatigue, cervical lymphadenopathy, and plantar pain. Two were asymptomatic but were investigated due to epidemiological linkage. Tests revealed eosinophilia between 780 and 4,505/mm^3, and elevated ESR and CRP. Serologies showed reactive IgM for leptospirosis in four patients and IgG in two; schistosomiasis titers were 1:64 in three cases, with progression to 1:256 in one of them. One patient presented ground-glass lesions on chest CT. Treatment included doxycycline 100 mg twice daily for 7 days in cases of leptospirosis, and praziquantel 600 mg three times daily for 2 days for schistosomiasis. One patient used amoxicillin with clavulanate. All evolved with clinical and laboratory improvement and were reported.

Comments: This report highlights the importance of epidemiological history-taking in infectious diseases. The shared exposure to the lagoon was decisive for early diagnosis, including in asymptomatic individuals. Clinical similarity between the infections requires attention to context to guide the investigation. Eosinophilia was more marked in schistosomiasis cases, while serology was essential for confirmation. Mandatory notification enabled epidemiological tracing and control measures. The positive response to treatment confirms the effectiveness of management based on well-defined clinical and epidemiological criteria.

Keywords: Epidemiological diagnosis, Neglected infectious diseases, Schistosomiasis, Leptospirosis.

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EVALUATION OF PHYSICAL, CHEMICAL, AND MICROBIOLOGICAL PARAMETERS OF A TREATED INDUSTRIAL EFFLUENT

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Introduction/objective: Agribusiness effluents represent a challenge due to the chemical, physical, and microbiological characteristics of their pollutants, which can generate impacts on public health. Advanced effluent treatment systems can be employed; however, these systems are unable to eliminate resistant microorganisms. In view of this, the

objective of this study was to evaluate physical, chemical, and microbiological parameters of treated effluent from a poultry and fish processing industry.

Methods: The physical-chemical parameters evaluated were pH, temperature, electrical conductivity, turbidity, hardness, chemical oxygen demand, biochemical oxygen demand, nitrite, nitrate, ammoniacal nitrogen, phenols, oils and greases, chloride, heavy metals (iron, copper, chromium, nickel, zinc, lead, and cadmium), and residue series. Coliform counting was performed using the multiple-tube technique. Bacterial isolation was carried out on Violet Red Bile Agar. Identification of isolates occurred by "Matrix-Assisted Laser Desorption Ionization – Time of Flight", and antimicrobial susceptibility was evaluated by disk diffusion on Müeller Hinton agar.

Results: Some physical-chemical parameters were above the limits determined by current legislation: salinity (0.06%), nitrate (19.53 mg/L), phosphorus (45.58 mg/L), iron (63 mg/L), chromium (0.39 mg/L), and copper (3.81 mg/L). The amount of total and thermotolerant coliforms was greater than 23 Most Probable Number per 100 mL. A total of 35 isolates belonging to the order Enterobacterales were obtained: 14 Klebsiella pneumoniae, 11 Escherichia coli, 2 Cronobacter sp, 2 Enterobacter cloacae, 2 Enterobacter kobei, 2 Enterobacter roggenkampii, and 2 Providencia stuartii. The isolates showed resistance to amoxicillin + clavulanic acid (52.9%), gentamicin (38.2%), cefoxitin (38.2%), amikacin (35.3%), ceftazidime (32.4%), ertapenem (23.5%), sulfamethoxazole + trimethoprim (23.5%), ciprofloxacin (20.6%), ceftriaxone (20.6%), cefotaxime (17.6%), cefepime (17.6%), nalidixic acid (14.7%), aztreonam (11.8%), imipenem (5.9%), and meropenem (2.9%). Resistance to carbapenems predominated among K. pneumoniae isolates.

Conclusion: Non-compliance of some analyzed parameters indicates failures in the effluent treatment process. Antimicrobial resistance in environmental bacterial isolates represents an emerging concern in the global health scenario.

Keywords: One health, Wastewater, Heavy metals, Bacterial resistance, Klebsiella pneumoniae.

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CLINICAL-EPIDEMIOLOGICAL CHARACTERISTICS AND DYNAMICS OF AMERICAN CUTANEOUS LEISHMANIASIS IN CEARÁ FROM 2007–2024: A TWO-DECADE STUDY

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Introduction: American Cutaneous Leishmaniasis (ACL) is an infection caused by a series of protozoa of the genus Leishmania sp. This zoonosis is transmitted by sand flies that become infected from wild reservoirs, such as marsupials, and domestic reservoirs, such as dogs, cats, and horses. The disease is endemic in the state of Ceará and its dynamics need to be better studied.

Methodology: This is an ecological, epidemiological study of the temporal aggregated type, using data obtained from the Tabnet platform from the Departamento de Informática do Sistema Único de Saúde (DATASUS) from 2007 to 2024, in the state of Ceará, Northeast Brazil.

Results: Between 2007 and 2024, 12,334 cases were reported, with a ratio of 1.17:1 between men and women. Cases were more frequent in males 53.9% (n=6651) than in females 46.1% (n=5682). The only exception occurred in 2016, when women surpassed men by 1.9% (n=8). During the study period, the most affected age group was individuals between 20–39 years with 27.5% (n=3,404), followed by the younger population of 0–19 years with 25.9% (n=3,195). The localized cutaneous form was the most prevalent 95.7% (n=11,811), while the cutaneous-mucosal form represented 4.3% (n=380). The cutaneous form reached its peak in 2010 (n=1,049), and the mucosal form in 2015 (n=31). Among the records, 143 cases did not have the clinical form informed. Brown ethnicity was the most diagnosed, representing 75.7% (n=9,341), followed by White individuals, with 16.4% (n=2,030), and the Black population with 4.3% (n=539). Between 2007 and 2018, there was a reduction in ACL cases in Ceará; the annual proportion of cases was higher in 2010 (n=1,068; 8.6%) and lower in 2018 (n=388; 3.1%). Notable sharp drops in the proportion of cases occurred in 2012 (n=979; 7.9%) and 2013 (n=549; 4.45%). However, from 2018 to 2024, there was an increase, reaching a new peak in 2023 (n=732; 5.93%), with 624 cases already recorded in 2024.

Discussion/Conclusion: Ceará is an endemic state for ACL with more than ten thousand cases recorded in the study period. A rising trend was noted in two periods, between 2007 and 2010 and between 2018 and 2021. The latter coincided with the COVID-19 pandemic period, when a slight increase in cases was noted. The profile of patients with ACL predominated in the localized cutaneous form, affecting mainly adult men, brown, aged 20 to 39 years. More studies are needed to understand the dynamics of ACL in the state.

Keywords: American Cutaneous Leishmaniasis, Ceará, Northeast, Epidemiology.

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