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TITLE

HISTORICAL SERIES OF MALACOLOGICAL SURVEILLANCE IN THE STATE OF ALAGOAS, BRAZIL (1997-2020)

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ABSTRACT

The state of Alagoas is one of the endemic regions for mansonic schistosomiasis (MS), with reports of moderate to high prevalence rates. It is vulnerability to environmental and health impacts, in addition to hosting a wide distribution of planorbid mollusks of the genus *Biomphalaria* spp., which are intermediate hosts in the *Schistosoma mansoni* life cycle. One of the responsibilities of the Schistosomiasis Control Program (PCE) is to conduct malacological research, to identify risk areas and transmission foci of the disease. This study's objective was to analyze the data from malacological surveys conducted by the Alagoas Health Secretariat throughout the entire period of PCE operation in the state, to assess the periodicity of malacological surveys over the years. The data comes from the Schistosomiasis Control Program System (SISPCE) of the Alagoas Health Secretariat. The analysis consisted of checking silent municipalities (>12 years without data), evaluating patterns of downgrades in collections and number of snails collected, species identification, and positivity. Between 1997-2020, 109,715 collection stations distributed across the 70 municipalities in Alagoas endemic to MS were surveyed and 86,688 snails were collected. The years between 1997-2000 had the highest searches for collection stations (72.16%) and the largest number of animals collected (60.29%), with emphasis on 1999 with 21.98% of stations visited and 21.70% of snails captured. From the 2000s onwards there was a sharp decrease in research and animal capture actions, significantly from 2004 onwards. The years 2019-2020 showed the lowest registers. From the total number of mollusks collected 40.80% were identified, of which 35.59% were identified as *B. glabrata*; 5.16% *B. straminea* and 0.05% *B. tenagophila*. By the distribution of the *B. tenagophila* species and its morphological similarity with *B. glabrata*, the occurrence might be mistaken. Among the animals collected, 1.08% were detected positive for *S. mansoni*, with 96.69% identified as *B. glabrata* and 3.31% as *B. straminea*. Concerning the adherence and consistency of municipalities that carried out malacological surveillance activities, 4 towns presented no data throughout the period evaluated (24 years), 41 did not present data for a period 20 years, and 20 cities did not report due to more than 12 years. Only 5 municipalities (Arapiraca, Junqueiro, Maceió, Penedo, Teotônio Vilela) weren't considered silent, as they reported data in at least 12 years of the analyzed period. The low adherence and decrease in mollusk tracking actions carried out until 2020, in Alagoas, especially in the most recent period, demonstrates the weakening of MS prophylaxis approaches while harming the effectiveness of other control measures. Government encouragement and compliance with EPC actions by the state and municipalities are necessary to improve the determination of transmission foci and the current scenario of Schistosomiasis in Alagoas.

KEYWORDS

Biomphalaria; PCE; SISPCE; Epidemiology.

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