



Epidemiological, demographic and clinical features of 348 Baggio-Yoshinari syndrome cases: A large retrospective study

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BACKGROUND

Baggio-Yoshinari syndrome (SBY) is a Brazilian tick-borne disease caused by *Borrelia burgdorferi*. The diagnosis is based on epidemiological, clinical and serology parameters.¹ Because it is not well recognized by Brazilian physicians, we aimed to describe its epidemiological, demographic and clinical features.

MATERIALS AND METHODS

This retrospective study included 3.973 SBY notification documents of suspected patients, whose sera sample were forwarded and analyzed at our Laboratory between 2015 and 2019. Questions on clinical parameters included: disease stage (acute disease <3 months); presence of migratory erythema (ME) lesion and report of systemic clinical symptoms.¹ The serological tests were ELISA and Western blotting to detect antibodies to *B. burgdorferi* of Northern American origin. The inclusion criteria were the presence of the EM, clinical symptoms and tick bite story. Patients suspicious of others infect or autoimmune diseases were excluded.

RESULTS

After applying the criteria, 348 (8.7%) out of 3973 cases were selected. The median age was 37 (2 to 78 years), with 48% female and 52% male. Approximately two-thirds of patients were from rural community and they came from Southeast (45.6%), South (26.7%), Center-West (15.8%), North (1.6%) and Northeast (1.1%). About two-thirds were in acute disease. From total number of 348 sera 41% showed positive serology. Following symptoms were found: Cutaneous: EM (100%), erythema nodosum (9.2%), petechial rash (8.9%), morbilliform lesion (8.0%), benign lymphocytoma (4.9%), scleroderma-like (2.3%); (b) Osteomuscular: arthralgia (55.0%), myalgia (54.0%), arthritis (22.4%), myopathy (13.5%), chronic fatigue (26.7%); (c) Neurological: headache (55.4%), sensory or motor peripheral radiculoneuritis (18.1%), cranial neuritis (11.4%), lympho-monocytic meningitis (4.0%); (d) Psychiatric (8.6%); (e) Cardiac (3.7%) and others: fever (51.0%), lymphadenopathy (20.0%).

CONCLUSION

BYS showed a wide age range presentation and affected both genders. The disease was reported in all national territory, mainly at rural area. Less than 50% of patients showed positive serology, possibly, because patients were mainly at acute disease. Furthermore, Brazilian borrelia is genetically and morphologically different from those found in Northern hemisphere 1. Despite of high suspicious of BYS cases among Brazilian physicians, its diagnosis is very difficult, because it is based mainly on clinical and epidemiological basis. Due these reasons, we assume that BYS is few diagnosed in the country, originating late chronic and severe cases.

1. Yoshinari NH et al. Rev Assoc Med Bras, 2010

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