

Usutu disease, was issued in 2016, in order to develop a network between human and veterinary surveillance. In September 2016, a human case of neuroinvasive WND, with symptoms of encephalitis and meningitis, was confirmed in a 38-year-old man from Trapani, by serological evaluation on serum and liquor. The subject, recovered from illness, referred to have spent his holiday in Santo Domingo in August 2016. The authors describe the application of the integrated plan in this human WND case.

Methods & Materials: According to the surveillance plan, sera and blood samples from 11 horses, 271 chickens and two dogs were collected around the residency of the human clinical case. The entomological monitoring was performed on mosquitos collected in 8 selected sites, within 1 km from the same residency. IgM and IgG ELISA assays were performed on sera. Blood and mosquito samples were tested by Real-Time RT PCR to detect the presence of WNV lineage 1 and 2.

Results: The most of the mosquitoes caught belonged to *Aedes albopictus*, *Culex pipiens*, *Culex hortensis*, and *Culiseta langiareolata*. Two dogs and two horses showed positivity for WNV IgG. The other samples were negative by serological and molecular assays.

Conclusion: The results of the animal and entomological surveillance did not show any active WNV circulation during the period object of this study. The IgG seropositivity in a few samples suggested a remote WNV presence. Integration of surveillance and monitoring activities was important to indicate that human case was not autochthonous and the man could have been infected abroad, during the holiday spent in the Caribbean.

<https://doi.org/10.1016/j.ijid.2018.04.4289>

UMP. 815

Development of high-performance immunoassay for *Brucella canis* and seroprevalence survey in humans and dogs of Buenos Aires urban area

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Background: Brucellosis remains as one of the most common zoonotic diseases worldwide. The infection is caused by intracellular facultative Gram-negative bacteria of the genus *Brucella*. Based on the lipopolysaccharide (LPS) structure, *Brucella* may occur either as smooth (S) or rough (R) species. *Brucella canis* causes disease in dogs and is the only one rough *Brucella* species that can infect humans. The public health impact of this urban zoonosis is not clear due to the lack of high performance laboratory diagnostic tests. For this reason, early and accurate diagnosis of brucellosis from dog origin is central to control the disease.

Methods & Materials: We developed and validated an improved enzyme and lateral flow immunoassays for the serodiagnosis of *B. canis*. To validate the assays, 284 dog sera obtained from naturally infected or healthy animals and 582 human sera from both infected patients or healthy donors were analyzed and the diagnostic specificity and sensitivity were determined. Finally, a blind serological survey was conducted including 1,040 serum samples obtained from urban dogs and 607 serum samples from human donors both from the Buenos Aires urban area.

Results: The results showed a prevalence higher than 5% in the dog population and near to 5% in humans highlighting the need of implementing new high-performance serological test as an effective way to improve the control of this

neglected urban zoonosis and reduce the risk of transmission to humans.

Conclusion: Canine brucellosis has been considered as an infection of low zoonotic potential. This misconception influenced the paucity of scientific advance on this subject, which is reflected in the scarce high precision diagnostic tests that exist today. In recent years, several reports of human brucellosis cases with confirmed isolation of *B. canis* raised a red flag on this neglected urban zoonosis.

<https://doi.org/10.1016/j.ijid.2018.04.4290>

UMP. 816

Snake-bites: a review of cases assisted at a reference hospital in the city of Buenos Aires, Argentina

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Background: Snake-bites are a growing health problem worldwide. There are more than 100 snakes species in Argentina but only 18 are of medical relevance. Currently, more than 700 cases are registered per year throughout the country, though there are not many national publications about it.

The aim of this study is to describe snake-bites cases assisted at a reference hospital in Buenos Aires city (BAC).

Methods & Materials: Observational and retrospective study of clinical records of in and outpatients with snake-bites assisted between 2000–2017. Demographic, clinical and epidemiological data were documented. Descriptive statistic was calculated in SPSS 22.0.

Results: Sixty-seven patients were assisted, 76% were male and 69% were from 15 to 49 years old. Fifty one percent (34/67) of the episodes took place during summer months and 63% while practicing recreational activities. Eighteen percent occurred in CBA, 30% in Buenos Aires province, 34% in the rest of the country, 12% outside Argentina, 6% without data. Seventy percent (46/67) was caused by poisonous snakes, where *Bothrops* represented 98% (45/46) of these cases. The bite was most frequently inflicted in the lower limb (64%). Thirty-six percent of the patients had performed some type of maneuver at the time of the accident, from which 38% (9/24) practiced tourniquet. Only 85% (39/46) received antivenom serum. Adverse effects were observed in 15% (6/39), being serum sickness the most frequent manifestation (50%). Forty-eight percent (22/46) had complications due to poisoning -with coagulopathy or bleeding as the most common clinical presentation. Fifty-two percent (35/67) of the patients received antibiotic treatment, though only 22% had a high suspicion of bacterial wound infection. Forty-six percent needed prophylaxis with tetanus vaccine.

Conclusion: *Bothrops* was the snake most frequently involved. Serum-sickness was the predominant adverse effect.

This study provides information about snake-bites attending in our country. There are few national publications about this topic. It is mandatory to know casuistry of each region in order to take adequate public health measures about this kind of envenomation.

<https://doi.org/10.1016/j.ijid.2018.04.4291>

