

## **BRUCELLOSIS AS AN OCCUPATIONAL DISEASE IN SLAUGHTERHOUSE WORKERS IN THE STATE OF ALAGOAS, BRAZIL.**

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Brucellosis is a zoonosis of great importance on the national scene, because it affects herd animals and can also be transmitted to humans. The risk of transmission is higher especially for workers who have close contact with the animals, such as slaughterhouse workers. Not enough research data is available about how widespread is the disease among bovine herds and its transmission to humans. Therefore, there is a lack of information about the risks of the disease and its respective prevention measures. The aim of this work is to survey slaughtered animals that tested positive for brucellosis. The animals tested were from a slaughterhouse in the interior of Alagoas, Brazil. This particular slaughterhouse receives animals from the cities of Arapiraca, Maribondo, Craíbas, Coité do Nóia, Taquarana, Campo Grande, Girau do Ponciano, Olho D'Água Grande and São Braz. The workers who are in direct contact with these animals were also tested. 200 cattle blood samples were collected and 30 human blood samples were collected respectively from the slaughterhouse's cattle and employees. Each sample was numbered and identified and forwarded to UFAL's Infectious Disease Laboratory where the samples were submitted to centrifugation for 5 minutes in order to obtain the blood serum. The samples were placed in Eppendorf tubes and frozen for future analysis. A triage test (AAT) was then performed. The technique used consisted in thawing the serum and the color pink antigen to room temperature, then placing 0.03 ml of the serum and 0.03 ml of antigen on a glass plate, and then mixing both. If lumps are formed, the serum tested positive. A 2-mercaptoethanol (2-ME) test was then performed to further confirm the positive results found. Of the 200 bovine samples examined, 42.5% were male and 57.5% were female, and 66.08% of the females' sampled were pregnant. After the triage test, one sample tested positive for brucellosis. 6.66% of the human's blood samples were collected from women and 93.34% from men and none of the samples tested positive or had a reaction to the AAT screening test. The conclusion of this study is that further investigation regarding slaughtering of serum-reactive animals is important. In order to further national public health, it is important to determine necessary preventive measures and promote brucellosis' eradication.

**KEYWORDS:** bovine, brucellosis, slaughterhouse, transmitted, zoonosis.