

Results Based on serological tests and virus genome detection by PCR, 202 patients were classified as dengue and 103 as non-dengue. For patients evaluated on days 0–3, a model including conjunctival hyperaemia and leucopenia achieved a sensitivity of 83% and specificity of 71% for dengue diagnosis, with an area under the receiver-operating characteristic curve of 0.82. In patients evaluated on days 4–7, a model including rash and thrombocytopaenia achieved an area under the receiver-operating characteristic curve of 83%, with a sensitivity of 71% and specificity of 87.5% for dengue diagnosis.

Conclusions Predictive models including clinical and simple laboratory tests data achieved moderate accuracy for diagnosing dengue in ambulatory febrile patients. In our population, these models were more accurate than currently used WHO dengue case definition (1997) and could be potentially useful for surveillance.

04-3.4 NEUROCYSTICERCOSIS IN PIG FARMING COMMUNITY FROM NORTH INDIA

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Introduction Neurocysticercosis (NCC) is a major public health problem, especially in the developing world and also increasingly reported in the developed world either due to migration of infected population or *Taenia solium* carriers. Studies from developing countries and Latin America identified NCC as the major cause (26.3%–53.8%) of active epilepsy and 2% of neurological / neuro-surgical admissions. We conducted a systematic study to estimate the disease burden in pig farming community of North India.

Methods Total 294 families from 30 villages were chosen based on 30 cluster sampling approach. Demographic, clinical and epidemiological data were collected from all the subjects. Individuals with active epilepsy were identified on door-to-door survey. Patients with active epilepsy and asymptomatic individuals underwent MRI of the brain.

Results Active epilepsy was identified in 5.6% populations and 48.3% of them had NCC; 15.1% healthy individuals had silent NCC. Epilepsy in the family and no separate place for pigs, intake of raw vegetable and undercooked pork, and lack of safe drinking water were identified as risks for NCC. TLR4 Asp299Gly and Thr399Ile

gene polymorphisms, increased Th1 cytokines, sICAM-1 and MMP-9 levels in serum were associated with symptomatic disease.

Conclusion Our studies demonstrate that NCC burden is extremely high in pig raising community. TLR4 gene polymorphisms, elevated Th1 cytokines, sICAM-1 and MMP levels in serum appear to be the predictors for NCC related active epilepsy. Since NCC is a preventable and potentially eradicable disease, appropriate control measures are required to reduce the disease burden.

04-3.5 THE NATIONAL SURVEY OF SEROPREVALENCE FOR EVALUATION OF THE CONTROL OF CHAGAS DISEASE IN BRAZIL (2001–2008)

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Introduction Chagas disease is still a relevant health problem in Latin America. In 1981, it was estimated that Brazil had about 5 million infected people. Since then, a control program consolidated in 1983 has produced evidences of reduction in transmission.

Methods A survey was held in a representative sample of rural Brazilian children up to 5 years of age. Blood was collected on filter paper from 104 954 children and screened with IFI and ELISA. Samples with positive or undetermined results were tested by western blot. From all children with confirmed positive result, as well as from their mothers, a whole blood sample was collected.

Results Infection was confirmed in only 32 children (0.03%). From them, 20 (0.02%) had maternal positive results, suggesting congenital transmission; 11 (0.01%) had non-infected mothers, indicating possible vector transmission. In further 41 the infection was confirmed only in the mothers, suggesting passive transference of antibodies. The 11 children presumably infected through vector were distributed mainly in the Northeast region. Remarkably, 60% of the 20 cases of probably congenital transmission were from the State of Rio Grande do Sul. This is the first demonstration of regional differences in vertical transmission of Chagas disease in Brazil, probably reflecting the predominant *Trypanosoma cruzi* groups (TcV and TC VI) found in this State.

Conclusion A systematic control program, together with socio-economic improvement in the last decades, practically interrupted Chagas disease vector transmission in Brazil. It is essential to maintain the preventive activities to consolidate this great achievement in public health.