Endemic toxoplasmosis and listeriosis in the perspective of ‘The problem of shelter dogs’ in Istanbul

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**Background:** Nowadays it is known that animal sourced infections may have serious threats against human health. It is a fact that Toxoplasmosis and Listeriosis are significant zoonotic infections and dogs play a substantial role on the prevalence of these infections. In our study, we have aimed to determine the seroprevalence of Listeriosis and Toxoplasmosis among shelter dogs in different animal shelters around Istanbul and to describe the role of dogs in the transmission of these zoonoses.

**Methods & Materials:** Blood samples from 100 dogs were collected and Tag-Man probe based Real Time PCR (qPCR) analyses of the samples were conducted regarding to the high sensibility and characteristics of this technique and the results were evaluated according to the gender and age of the dogs. Real Time PCR (qPCR) analyses were conducted using specific primers and probes that target the gene regions 529 bp RE for Toxoplasma gondii and Listeriolysin O (hyl A) for Listeria monocytogenes.

**Results:** According to our results, it is found that 19 dogs (19%) out of 100 are T. gondii positive, and 12 dogs (12%) are L. monocytogenes positive. It is seen that seropositivity among the 0-2 age group is high in both zoonoses and also according to gender L. monocytogenes is high among the females and T. gondii is high among the male dogs.

**Conclusion:** When compared to other cities in Turkey, it is found that our results in Istanbul province have a lower prevalence. Beside this, we think that these results may be a serious risk for the people living in this city and optimal protective cautions should be taken. We estimate that our study will contribute the data about the prevalence of these zoonoses not only in our country but also all around the world.
Conclusion: The present case gives dimension to varied presentations of brucellosis. In particular brucellosis should be kept as a strong differential diagnosis of PUO in an endemic zone despite non encouraging brucella serology results. We advocate serial serology testing should be performed before contemplating invasive procedures for establishing cause for PUO.

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Clinical spectrum of melioidosis at a tertiary care hospital in South India


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Background: Melioidosis, caused by the Gram-negative bacillus Burkholderia pseudomallei, is an infectious disease of public health and a bioterror threat importance. Clinical presentations of melioidosis are protean, hence, called a remarkable imitator. The number of cases of melioidosis reported in India is considered to be the tip of an iceberg as several cases may not be diagnosed due to lack of awareness among the clinicians about the infection and the laboratories not capable of isolating and identifying B. pseudomallei.

Methods & Materials: It is a retrospective study and data was collected from the inpatient case records of patients with melioidosis from 2004 to 2014. We report the clinical features and outcome of cases of this unusual infection at our institute, a tertiary care hospital in South India.

Results: There were 17 cases of melioidosis from our Institute over last 10 years. Majority of the patients were agriculturists by occupation. Diabetes mellitus was the underlying comorbid condition in all patients except in one case. Twelve out of 17 cases (70.59%) presented with sepsis. Six cases (35.29%) had fulminant course and succumbed before the microbiology reports arrived and definitive treatment is started. Skin lesions were apparent in 10 (58.82%) cases. Seven out of 17 (41.18%) cases had deep-seated abscesses involving the liver, spleen, prostate, brain, bones and joints. Thirteen cases out of 17 (76.47%) had pneumonia.

In all the cases, B. pseudomallei was isolated from the blood using the BacT/alert (bioMerieux) system, within 24 hours. All the isolates were sensitive to co-amoxiclav, co-trimoxazole, ceftazidime and carbapenems. The distinctive pattern of susceptibility, to TMP-SMX was an important clue in the identification of B. pseudomallei.

Eleven patients out of 17 received appropriate antibiotic therapy based on the susceptibility reports, by 4th day of hospitalization. The initial intensive regime consisted of intravenous ceftazidime for 2 weeks or imipenem or meropenem for 14 days followed by oral TMP-SMX (320/1600 mg/kg 12th hourly) for 3–6 months.

Conclusion: Pneumonia was the most common presentation of infection by B. pseudomallei. Diabetes is present in 94% of cases of melioidosis presenting to our institute. Mortality was observed in 6 (35.29%) cases.

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