

Results: From 2000–2015 a total of 57 cases of tularemia were reported in Armenia. Of these, 84.2% were male and 78.9% were from rural areas. Distribution of age groups were: ≤ 18 –24.6%, 19–30–54.4%, 31–44–14.01%, ≥ 45 –7.0%. The most common symptoms include: fatigue (n=52, 91%), fever (n=45, 78.9%), pharyngitis (n=40, 70.2%), headache (n=27, 47.4%), hepatomegaly (n=5, 8.8%), and splenomegaly (n=2, 3.5%). The average hospitalization stay was 35.7 days. The most frequent clinical forms were bubonic (n=28, 49.1%), oropharyngeal (n=21, 36.9%) and oculoglandular (n=8, 14%). In all patients enlargement of the lymph nodes was reported, most frequently the cervical ones (n=52, 91.2%). Ultrasound imaging showed hepatosplenomegaly in three cases (5.2%). Antibiotics were given prior to admission for 26 (45.6%) patients and during hospitalization for 54 (94.8%). Twenty-three (40.4%) received monotherapy while 31 (54.4%) received combined therapy. Diagnosis was based on agglutination reaction in most cases (n=50, 87.7%). For seven patients, diagnosis was made based on only clinical-epidemiological history without laboratory confirmation (n=7, 12.3%). Surgical treatment was used for 8.8% patients. Presence of rodents at household was mentioned by 14 (24.6%), while four (7%) noted a vector bite and three (5.3%) had contact with rodents. Over half (56.2%) had centralized water.

Conclusion: Most of the patients were male and from rural areas. People from 19–30 years of age were more likely to contract tularemia. Approximately half of the patients had the bubonic form, mainly cervical. Other potential risk factors that might explain a long hospitalization (e.g. suppressed immune system, treatment failure etc.), should be a topic for future investigations.

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Evaluation of pet animals involved in assisted interventions (AAI) as potential carriers of bacteria resistant to antimicrobials: Preliminary data



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Purpose: The attention paid to pets involved in Animal-Assisted Interventions (AAI) for their therapeutic benefits to humans is increasing worldwide. Their close contact with vulnerable categories prompts the consideration of the transmission of zoonotic pathogens between animals and patients. This study is aimed to verify the health conditions of pets used for AAI and to evaluate the potential spread of pathogens to humans, especially those causing severe hospital and community acquired-infections (HAI) such as extended-spectrum cephalosporin and carbapenem resistant *Enterobacteriaceae*, other Gram-negative multidrug-resistant bacteria (such as *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, erythromycin and ciprofloxacin resistant *Campylobacter* spp., e.g.), methicillin-resistant *Staphylococcus* spp., vancomycin-resistant *Enterococcus* spp. and toxigenic *Clostridium difficile*.

Methods & Materials: Clinical examination of 65 animals (42 dogs, 22 donkeys and 1 horse, owned by 19 different therapists/handlers) involved in AAI was assessed. Faecal, perineal and oral/nasal samples were processed following classical microbiological procedures. The phenotypic antimicrobial-resistance profiles were determined by selective/chromogenic media supplemented with specific drugs or by the disk diffusion method according to the CLSI guidelines.

Results: The 65 animals tested were all in good health and none carried multidrug-resistant *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Klebsiella* spp. nor *Salmonella* spp. Of the 42 dog sampled, 3 (7%) were positive to thermophilic *Campylobacter* spp., 1 (2%) to extended-spectrum cephalosporin-resistant *E. coli*, 6 (14%) to vancomycin-resistant *Enterococcus* spp., 3 (7%) to methicillin-resistant *Staphylococcus* spp., 1 (2%) to multidrug-resistant *Stenotrophomonas maltophilia* and 1 (2%) to *C. difficile*, respectively. Lastly, 1 (5%) donkey was positive to methicillin-resistant *Staphylococcus* spp.

Conclusion: These preliminary data highlight the good health conditions of the animals tested. Only few pets carried potentially zoonotic antimicrobial-resistant human pathogens. These data confirm that HAI are mainly associated with the spread of pathogens through person-to-person transmission and medical devices contaminations. However, our findings suggest that the presence of potential pathogens with resistant traits is not irrelevant and should be evaluated especially in animals in close-contact with immunocompromised/diseased persons. The lack of guidelines and of a systematic surveillance on pets involved in AAI as possible asymptomatic carriers of antimicrobial-resistant pathogens, poses the need to investigate their role in the transmission of these zoonoses to humans.

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Seropositivity of delta hepatitis in patients with positive hepatitis B surface antigen, between 2011 and 2016



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Purpose: Hepatitis delta virus is defective RNA virus that requires hepatitis B virus to cause infection. Co-infection and superinfection are two forms of HDV according to the association with HBV. The prevalence of HDV infection is less than HBV infection but the clinical feature caused by HDV infection is more severe.

Methods & Materials: This study included a total of 1131 HBsAg positive serum samples which have sent to Microbiology Department of Trakya University Health Center for Medical Research and Practice in Edirne, between 2011 and 2016. Delta antibodies in HBsAg positive 1131 serum samples were studied by methods micro-ELISA (Diagnostic Bioprobes, Italy) HBsAg, HBeAg, anti-HBe were studied by chemiluminescence assay (Roche Diagnostics, USA). The data of patients were evaluated, retrospectively.

Results: Twenty eight of 1131 HbsAg positive serum were identified as positive in terms of delta antibodies. The ratio of HDV in HBsAg positive patients was found to be 2.47%. Twenty seven and one out of twenty eight patients were determined as superinfection and co-infection, respectively.

Conclusion: Our country is located in an intermediate endemic area for HDV. Although, seropositivity of HDV in this region has found a lower than the other regions of Turkey but also especially chronic HBV patients should be screened for HDV.

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