

**Conclusion:** The commercially prepared vaccine did not induce a robust, measurable humoral response in captive deer. Killed virus vaccines have previously been shown to provide effective protection from BTV in sheep. Efficacy of autogenous vaccines depends on multiple factors including the similarity of viruses in the vaccine to the wild-type strain, the use of a proper adjuvant to induce immune response, and purity of the vaccine. Vaccine makers must conduct proper testing of purity and efficacy of vaccine prior to offering its project to the market, and cervid owners are advised to test for antibody production if they are going to use autogenous vaccines.

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## 20.181

### The changing patterns of Dengue and malarial infections -study from a Hospital in Mumbai India



A. Barua\*, M.E. Yeolekar

*K J Somaiya Medical College and Hospital, Internal Medicine, Mumbai/IN*

**Purpose:** A definite change in the trend of Dengue and malarial infections, their clinical features and outcomes has been noticed recently. The present study, in a Mumbai hospital, during three consecutive monsoons, was carried out, to observe and compare the changing patterns of Dengue and malarial infections, in Mumbai, India.

**Methods & Materials:** A comparative, retrospective cross sectional study of Dengue, Malaria and their coinfections was carried out, during three consecutive monsoons (June to November; 2013–2015) in a Mumbai hospital. Febrile patients, during this period, were investigated for both Dengue and Malaria simultaneously. Elisa (NS-1/IgM) and peripheral smear examination was done to confirm Dengue and Malaria, respectively. Clinical comparison of signs and symptoms, severity and outcomes was systematically carried out.

**Results:** During 2013, of the diagnosed acute febrile cases, 41 were Malaria, 39 being *P. vivax* and 2 mixed Malaria. 52 cases of Dengue were confirmed. 2014 saw a total of 55 malaria cases, 23 being *P. falciparum* and 16 cases of *P. vivax* and mixed Malaria each. During the year, 84 Dengue cases were detected. 2015 saw a surge of acute febrile illnesses. 117 cases were of Malaria, 107 being *P. vivax* and only ten positive for *P. falciparum*. No mixed Malaria cases were encountered; whereas Dengue cases escalated to 206. During 2014, 16 (10.25%) coinfection (Dengue and Malaria) cases were noted, whereas in 2015, 28 (6.7%) were coinfection cases. No coinfection cases were observed during 2013. Mortality during 2013 and 2014 were three each, all being *P. vivax* during 2013 whereas one was coinfection and two malarial deaths in 2014. Recovery was total in 2015.

**Conclusion:** Within the three consecutive years, it was observed that Dengue cases exceeded Malaria, as a major cause of monsoon related febrile illnesses. Within the malarial infections, *P. falciparum* appears to be on the decline. *P. vivax* has increased in incidence and severity, thus not considered benign any longer. Focussed malaria control probably led to fewer malaria cases. Dengue formed the largest group, the surge being probably related to increased *Aedes* breeding sites. Changing clinical trends require close monitoring. Enhanced surveillance and public health measures can contribute to better disease control.

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## 20.182

### West Nile virus neuroinvasive disease: The first confirmed case in Bulgaria



M. Baymakova<sup>a,\*</sup>, I. Trifonova<sup>b</sup>, E. Panayotova<sup>b</sup>, S. Dakova<sup>a</sup>, M. Pacenti<sup>c</sup>, L. Barzon<sup>c</sup>, E. Lavezzo<sup>c</sup>, K. Ramshev<sup>a</sup>, K. Plochev<sup>a</sup>, I. Christova<sup>a</sup>

<sup>a</sup> *Military Medical Academy, Sofia/BG*

<sup>b</sup> *National Center of Infectious and Parasitic Diseases, Sofia/BG*

<sup>c</sup> *University of Padova, Padua/IT*

**Purpose:** The first confirmed human case of WNV infection in Bulgaria was presented as a West Nile neuroinvasive illness with fatal outcome in a Bulgarian elderly man.

**Methods & Materials:** For the etiological diagnosis of WNV infection specific serological tests were applied for detection of IgM in CSF and IgM and IgG in serum. WNV RNA was detected by real-time RT-PCR. Full genome sequencing was performed.

**Results:** In the summer 2015, a 69-year old man with cardiovascular disorder and a history of mosquito bites and no recent travels outside Bulgaria, developed a febrile syndrome, tremor, and weakness, followed by neurological disturbances with coma and lethal outcome. CSF examination showed mild lymphocytic pleocytosis. WNV-specific IgM antibodies were detected in CSF and WNV-specific IgM and IgG antibodies were found in serum, WNV RNA was detected in a urine sample. Sequencing of the full viral genome and phylogenetic analysis demonstrated that the virus belonged to Southern-European WNV lineage 2 clade and had high sequence similarity with WNV strains circulating in Greece and in Hungary.

**Conclusion:** This case report demonstrates the presence of WNV lineage 2 in Bulgaria and supports public health interventions for vector control and prevention of WNV transmission because of the risk of severe neuroinvasive disease and the high mortality rate, especially in elderly patients with co-morbidity.

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## 20.183

### Severe clinical forms of Mediterranean Spotted Fever: A case series from an endemic area in Bulgaria



M. Baymakova<sup>a,\*</sup>, L. Pekova<sup>b</sup>, K. Plochev<sup>a</sup>, P. Parousheva<sup>b</sup>

<sup>a</sup> *Military Medical Academy, Sofia/BG*

<sup>b</sup> *Stara Zagora University Hospital, Stara Zagora/BG*

**Purpose:** The aim of this study was to describe clinical, epidemiological and laboratory characteristics in patients with severe forms of Mediterranean spotted fever admitted to Bulgarian university hospital in endemic region.

**Methods & Materials:** A retrospective study was conducted at the Department of Infectious Diseases, Stara Zagora University Hospital (Southeastern Bulgaria) between April 2015 and June 2016. For the analyzed period 54 cases had clinical and laboratory data for Mediterranean spotted fever (MSF). Raoult diagnostic criteria were used for the evaluation of severity. For the etiological diagnosis serological tests were applied. MSF-specific IgM and IgG antibodies were detected in serum by indirect immunoenzyme assay (ELISA IgG/IgM, Vircell, Spain). *Rickettsia conorii* ELISA IgG Sensitivity 85%, Specificity 100% and *Rickettsia conorii* ELISA IgM Sensitivity 94%, Specificity 95%. Statistical analyze was done by MS Excel 2007 and SPSS Statistics, version 19.0.