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**West Nile fever during the 2015 season: a view from a regional hospital in Israel**

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**Background:** West Nile Fever (WNF) is a mosquito transmitted viral disease known to be endemic in Israel. The largest outbreak occurred in 2000. In 2015, 149 cases of WNF disease were reported by the Israeli Ministry of Health (MOH) during WNF-season (summer-autumn), a 4-fold increment compared to 2014, and 2-fold compared to 2013 and 2012. In the Ashkelon district, 17 WNF cases were identified in 2015 and 13/17 were admitted at Barzilai Medical Center (BMC), Ashkelon district main.hospital. We characterized the 13 admitted cases, and analyzed their burden on overall CNS disorders during the WNF-season and their economic impact during hospitalization.

**Material/methods:** Patients with meningitis, encephalitis or Guillain-Barre syndrome (GBS) (from now CNS disorders), diagnosed with WNF by serology/PCR, between 1/6/15–1/1/16 were included in the study. Results were compared to the previous 2 years. Cost analysis was performed based on mean length of hospital stay (LOS) in days/patients, with a daily MOH based cost of 2169 NIS.

**Results:** 51 patients presented with clinical CNS disorders during the 2015 WNF-season, 13 of which were diagnosed with WNF (25.4%). In the previous 2 years, only 1/26 (3.8%) in 2014 and 1/24 (4.1%) in 2013 CNS disorders were diagnosed as such. Most patients were city dwellers (10/13, 77%) residing in Ashkelon, Ashdod and Kiriath-Gat. Only 2/13(15%) reported a recent history of mosquito bite. Of the 13 (7 males;6 females) 12 were adults (mean age 65.4) and 1 was a 9 years old child. Within the adults, most (10/13;77%) had associated chronic conditions (diabetes, hypertension, cancer).

All WNF cases in 2015 presented with CNS disorders: 9 (69%) with encephalitis, 3 (23%) meningitis, and 1(2%) GBS. Four patients (30.7%) required mechanical ventilation and 3/13 (23%) died (2 during hospitalization and 1 within 4 weeks after discharge). Mean WBC 9000+/-2300 cells; CRP 60+/-73; CSF showed pleocytosis in all patients (120+/-187cells/ml); glucose level 67.6+/-17.5mg%. Mean LOS for WNF patients was 20.6 days, significantly more extended than average LOS 9.7 for all acute neurological disorders in the same year. The hospitalization cost of WNF cases during the 2015

season (596,268 NIS), accounted for 55% of the overall costs of all CNS disorders (1,073,000 NIS) during that period, and was independently higher than the overall cost of all CNS disorders in previous 2 years (451,152 NIS in 2014; 463,298 NIS in 2013).

**Conclusions:** For the first time, we have characterized the cases of WNF and the health burden in a regional hospital in Israel during an intense year of WNV infestation. Our case load of 13 patients comprises 8.7% of the national incidence for this year. Intense control measures at the municipal and national level are required to control this zoonotic seasonal disease in Israel.