**Strle F, Stupica D, Bogovic P, Vistainer P, Wormser P. Is the risk of early neurologic Lyme borreliosis reduced by preferentially treating patients with erythema migrans with doxycycline? Diagnostic Microbiology and Infectious diseases (2018, in press).**

* **Abstract**

Doxycycline is highly effective treatment for early neurologic Lyme borreliosis (NLB). Nineteen studies were reviewed to determine if treatment of patients with erythema migrans with other oral antibiotics would increase the risk for developing NLB. In the eight studies that directly compared doxycycline to another antibiotic, the pooled difference indicated a 0.2% greater risk of developing NLB in doxycycline-treated patients (95% CI: −1.0%, +1.4%; *P* = 0.77), with an estimated heterogeneity of 0.0%, *P* = 0.58. Overall, in the 19 studies, NLB was reported in 8/828 (1.0%; 95% CI: 0.42%, 1.89%) doxycycline-treated patients versus 6/1022 (0.6%; 95% CI: 0.22%, 1.27%) patients treated with other antibiotics (*P* = 0.42). Based on the 95% CI calculation (−0.5%, +1.40%), patients receiving nondoxycycline treatment regimens collectively might have at most a 0.5% greater risk for developing NLB. Available data suggest that oral doxycycline is not superior to comparators for preventing NLB in patients receiving treatment for erythema migrans.