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Background. Lyme disease (LD) is an emerging infectious disease in Canada due to northward expansion of the geographic range of Ixodes scapularis, the principal tick vector for the LD agent Borrelia burgdorferi, into central and eastern Canada. This study aims to (i) summarize the surveillance data for LD cases reported in Canada between 2009 and 2015, (ii) identify potential environmental risk factors and (iii) develop an acrological risk indicator for passive surveillance of occurrence of human cases.

Methods. We described the distribution, trends, demographic and clinical characteristics of cases of the disease. Logistic regression models were used to identify risk factors for the occurrence of LD: 1) demographic (age and sex), and 2) environmental (type of forest cover, temperature and abundance of ticks). Passive surveillance data were used to develop an acrological indicator of at-risk areas for LD.

Results. The number of reported LD cases increased more than six-fold overall, from 144 cases in 2009 to 917 cases in 2015, mainly due to locally acquired infections. LD incidence in Nova Scotia has risen sharply since 2013 and was the highest in Canada over the study period. Children below 15 years and adults of the 55-74 age groups reported highest incidence. Significantly more men than women were infected and men had significantly more symptoms of late disseminated LD than women. Variability in clinical manifestations is well between provinces, years, for children below 15 years and between age groups. The majority of cases were reported between April and November and there was an increase in risk areas. The abundance of Ixodes scapularis ticks collected on humans and deciduous forest cover were significantly associated with the occurrence of LD cases at the municipality scale. Passive surveillance provides a cost-effective alert tool for public health authorities to timely identify risk areas and target vulnerable populations and front-line health professionals by means of awareness campaigns.

Conclusion. These findings showed that LD continues to increase in Canada, both over time and geographically, underlining the need to implement better preventive strategies, early disease recognition and treatment and efficient surveillance systems.

Disclosures. All authors: No reported disclosures.

1123. Patient Safety and Efficacy of Metronidazole 1 g Intravenous Every 24 Hours
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Background. Metronidazole (MTZ) is an imidazole that is used to treat parasites and anaerobic infections. The traditional dose of 500 mg every 6 to 8 hours achieves adequate serum concentration to treat most anaerobic infections. MTZ has a concentration dependent bactericidal activity with a long half-life of 8 hours and also exhibits post-antibiotic effect. High temperature lacks clinical data in regards to a once daily higher dose of IV MTZ.

Methods. A retrospective quality improvement project via electronic medical record review of 88 adults who received MTZ 1 g IV daily at a single tertiary medical center, from April 2014 to October 2016. Inclusion criteria were patients >/= 18 years who received MTZ 1 g IV every day for >/= 48 hours.

Results. Of the 88 patients who received 1 g of MTZ, 66 met inclusion criteria. Mean age was 58 years (range 24 to 90 years). Indications for use are shown in Figure 1. Mean duration of therapy was 10 days (range 2 to 42 days). Twenty-nine (43.9%) received </= 6 days and 37 (56.1%) received >/= 7 days. Fourteen (21%) were discharged home on MTZ 1 gm IV daily for 4–6 weeks duration. One patient had a documented adverse reaction (severe nausea) while the other 65 tolerated well. No documented treatment failure was reported.

Conclusion. MTZ has been used in combination with other antimicrobial agents to treat anaerobic infections. It is generally well tolerated when administered in dosages of </=2gm per day. Pharmacodynamic studies have demonstrated activity for 12 to 24 hours after administration of 1 gm of MTZ. Our study showed no safety concerns with 1 gm daily dosing and no reported treatment failure. The limitation of our study is passive surveillance cohort. The potential advantages of once daily dosing include optimized bacterial killing, minimization of drug administration, and reduction of the cost of antibiotics as well as the cost of administration. Our safety and quality improvement project support that MTZ 1 gm IV daily dose is potentially a safe, efficacious and cost effective alternative and 8% of good cultures drawn were positive.

Disclosures. All authors: No reported disclosures.