

S. Mavin¹, R. Evans¹¹Microbiology, Raigmore Hospital NHS Highland, Inverness, United Kingdom**Objectives:**

Lyme borreliosis (LB) is becoming increasingly important in Scotland, especially in the Scottish Highlands, an area of high incidence. LB was a notifiable disease in Scotland until 2010 and although the National Lyme Borreliosis testing laboratory reported all laboratory confirmed cases, the data held by Health Protection Scotland varied and the reporting of clinical cases was limited. Data is now dependent on electronic data gathering, which is problematic.

The aim of this study was to examine the distribution of laboratory confirmed cases of LB in Scotland over a five-year period and to study the clinical spectrum using questionnaire data on those cases from the Scottish Highlands.

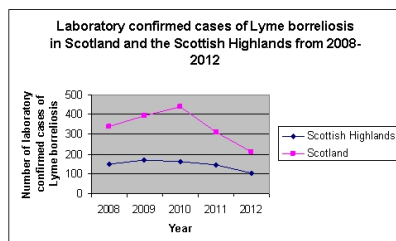
Methods:

General demographic data (age/sex/referring laboratory) from all cases of LB confirmed by the National Lyme Borreliosis Testing laboratory from 1st January 2008 to 31st December 2012 was analysed. Data (clinical symptoms/ signs, details of any tick bites and if patient considered by medical practitioner to have LB) from questionnaires returned to the laboratory from all new cases within the Scottish Highlands during this time period was also analysed.

Results:

The number of laboratory confirmed cases of Lyme borreliosis in Scotland peaked at 440 in 2010 (incidence of 9.42 per 100,000 population) but decreased in the following two years (Figure 1). In total, there were more males than females (54 vs 46%). The age of patients followed a normal distribution, with a peak in the 50-54 years age group.

Figure 1: Number of new seropositive patients in Scotland and the Scottish Highlands from 2008 to 2012



Patients referred from the Scottish Highlands represented the majority of new cases (43%) in Scotland. However, the number of cases in the Scottish Highlands remained constant during the study period (incidence ranging from 31.89 to 52.44 per 100,000 population). 73% of questionnaires (532/726) of new cases from the Scottish Highlands were returned. Of these, 69% patients were deemed by the clinician to have LB and only 55% could recall a tick bite. 44% were recorded as having erythema migrans and 16% with rash, whereas 12% had neurological, 23% joint and 1% cardiac symptoms.

Conclusions:

The low rate of patients with erythema migrans was surprising. Whilst the results may reflect the unwillingness of clinicians to diagnose a rash as erythema migrans (non erythema migrans rash recorded in 16%) it is more likely that it reflects clinical awareness within the Scottish Highlands, with most cases of erythema migrans treated without laboratory confirmation. This would indicate that the incidence of LB is much higher than reported. The National Lyme borreliosis testing laboratory is currently working with Health Protection Scotland to improve the data collated to establish a more accurate disease burden within Scotland.