

**Lyme Disease:  
A Tayside Perspective**  
Dr David Ashcroft



Aberfeldy and Kinloch Rannoch Medical Practice

- The Heart of Scotland: lots of long grass and deciduous woodland.
- Infamous for its ticks.
- I will talk about:
  1. A few cases from Aberfeldy & Rannoch.
  2. Practice Lyme Disease Audit 2007 to 2010



**Cases in Aberfeldy 1.**

- 5 year old boy.
- Tick spotted by parent and removed by tick remover.
- Subtle Erythema Migrans rash developed a week later.
- Treated with Amoxicillin 250mg TDS for 2 weeks.
- Complete resolution.
- **Lesson: be vigilant.**



**Cases in Aberfeldy 2.**

- 40 year old outdoor guide.
- Previously very fit and well.
- Several weeks of poor concentration, tired all the time.
- Non specific rash mentioned.
- Bloods all normal.
- Advised to reduce stress and alter work-life balance.

**Cases in Aberfeldy 2.**

- Comes back asking for a Lyme disease test: +ve
- Oral doxycycline 100mg BD for 2 weeks.
- Condition deteriorates with headaches, myalgia, arthralgia. (CT and LP normal)
- I.D. admission and 2 weeks IV Ceftriaxone.
- After 1 year fatigue is starting to improve.
- **Lesson 1: Think of Lyme in fatigue.**
- **Lesson 2: Routine bloods not helpful.**

**Erythema Migrans**



### Cases in Aberfeldy 3

- 50 year old female with right loin pain and fever.
- Two admissions to PRI with presumed pyelonephritis.
- GP tested for Lyme: positive.
- Admission to ID for IV ceftriaxone.
- Still has chronic fatigue after 4 years.
- **Lesson: test for Lyme**

### Erythema Migrans



### Cases in Aberfeldy 4

- 47 year old man at T in the Park
- Presented later in week with rash: 15cm dia area hot, tender, red, swollen, LNs.
- Puncture mark on elbow ?insect bite.
- Diagnosis = cellulitis
- Started on clindamycin as penicillin allergy
- Lyme serology negative.

### Cases in Aberfeldy 4

- 6 weeks later still very tired.
- Joint pains but no synovitis.
- Repeat serology weak positive.
- Started on oral treatment but also referred I.D. and received 2 weeks I.V. antibiotics.
- 2 years on still has fatigue and joint pain.

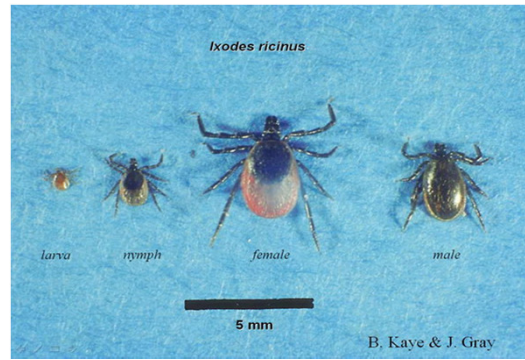
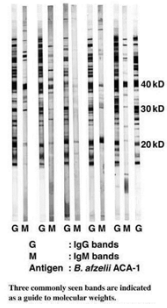
### Cases in Aberfeldy 4.

- **Lesson 1: be wary of 'cellulitis'.**
- **Lesson 2: use doxycycline for cellulitis.**
- **Lesson 3: Don't wait for serology before treating.**
- **Lesson 4: Serology may well be -ve during Erythema Migrans anyway.**

### Lessons Learned

1. Be vigilant, especially with children.
2. Think of Lyme in fatigue/joint pain.
3. Routine bloods not helpful.
4. Test for Lyme.
5. Be wary of cellulitis.
6. Think about using doxycycline for cellulitis.
7. Don't wait for serology before treating.
8. Serology may well be -ve during Erythema Migrans anyway.

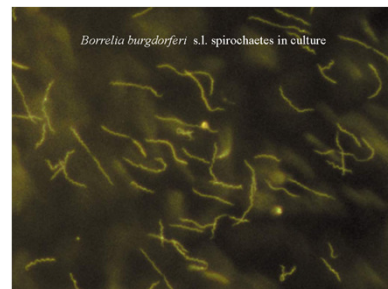
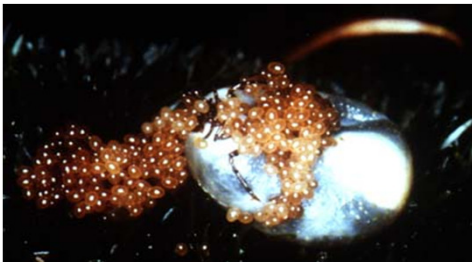
### Western Blot



Nymphal ticks on white-footed mouse (*Peromyscus leucopus*)  
Sarah Hamer



### Borrelia Burgdorferi



### Aberfeldy Lyme Audit

- Started due to a number of well known members of the community contracting Lyme Disease.

We use Read codes for:

- Erythema Chronicum Migrans
- Lyme Disease
- Tick bite, infected
- Tick bite, not infected

Entry to audit:

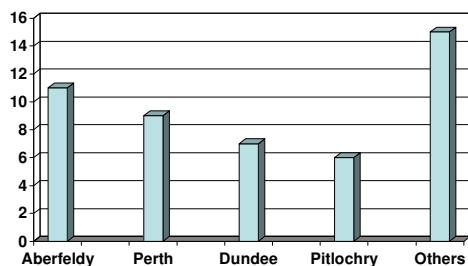
- read code of LD/ECM/infected tick bite
- + antibiotic Rx for ECM/LD)



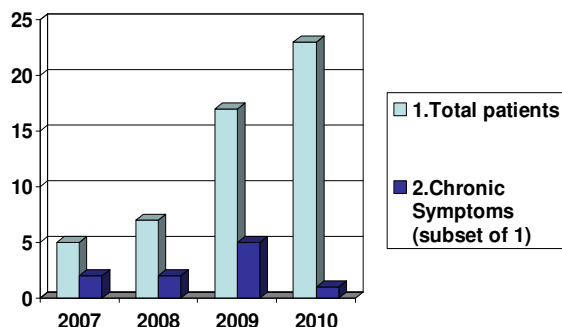
### Etape Caledonia 2009



### Lyme Notifications In Tayside 2009



### Aberfeldy Lyme Audit



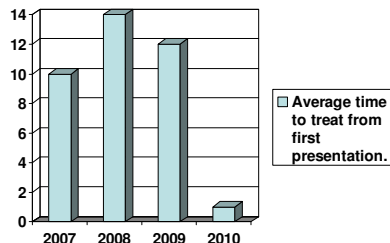
### Aberfeldy Lyme Audit 2007,2008, 2009

- 9 Patients out of 29 (31%) had Chronic Symptoms (lasting > 3 months) : fatigue, myalgia, arthralgia, headaches.
- 5 out of 9 had no recollection of tick bite.
- 8 out of 9 had ECM rash.
- 8 had positive serology (1 not done).
- 4 had IV ceftriaxone from I.D.

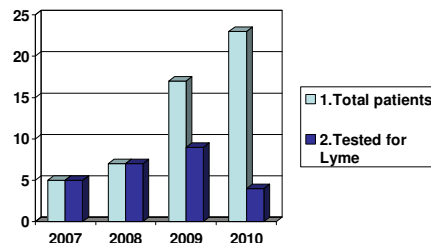
### Aberfeldy Lyme Audit 2010

- 2010: 1 patient with chronic symptoms (from Eastern Europe, tick bite 15 years ago).

### Aberfeldy Lyme Audit



### Testing for Lyme Disease



### How Common Is It?

**Dr Ho Yen, Microbiologist, Inverness:**

- Incidence of Lyme borreliosis in 1998 was 1.25 per 100,000.
- Figures in 2007/2008 show that in Scotland the overall incidence is 5.9 per 100,000.
- In Highland, the overall figure is 43.4 per 100,000 and rising to 81 per 100,000 during the summer months.
- Aberfeldy Lyme Audit: 125 to 500 per 100,000! i.e. up to 23 patients out of population of 4600

### The Aberfeldy Experience

- Ask about Tick bites.
- Think about where bites would be eg groins, axilla, waistband.
- If it looks like EM treat. Don't wait for serology which will probably be negative at this stage anyway.
- Beware of 'cellulitis-looking' rashes.
- Use co-amoxiclav or doxycycline for cellulitis if possible EM.
- Fatigue: ask about tick bites and check serology.

Bottom Line: treat early.



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