**Duration of initial antibiotic course is associated with recurrent relapse in protracted bacterial bronchitis**

**Background**

Protracted Bacterial Bronchitis (PBB) is a leading cause of chronic wet cough in children. Antibiotic response is a diagnostic criterion but there is little evidence to inform duration of treatment. Relapse is common and those who relapse frequently (recurrent PBB) have an increased risk of bronchiectasis.

**Aim**

To investigate factors associated with recurrent PBB.

**Methods**

A cohort of children with PBB treated with amoxicillin-clavulanate and followed-up for ≥12 months was retrospectively identified. Age, sex, duration of cough, bronchoscopy results, duration of antibiotic course and number of relapses in the 12 months post treatment were recorded. A logistic regression model explored the association between PBB relapse (≥1 episode), recurrent PBB (>3 episodes) and the other recorded factors.

**Results**

The 66 children (35 boys) had a mean (SD) age of 2.7 (2.2) years. Mean cough duration was 8.9 (6.0) months. Initial amoxicillin-clavulanate course was 2 (n=29), 3 (n=2), 4 (n=7) or 6 weeks (n=28). In 12 months post treatment 45 (68%) had ≥1 and 20 (30%) had >3 episodes. No factor was significantly associated with relapse. However, duration of amoxicillin-clavulanate was significantly associated with recurrent PBB (p=0.017). The rate of recurrent PBB in children prescribed 6 weeks antibiotics (4/28) was lower than those prescribed ≤4 weeks (16/38), Chi squared p=0.015.

**Conclusions**

Recurrent PBB and therefore the risk of bronchiectasis is significantly lower in children treated with six weeks of antibiotics. This has potentially important implications as recent international guidelines suggest using two weeks, extended to four if cough resolution is not achieved.