Outbreak of Moraxella catarrhalis in a respiratory unit

S J Richards, A P Greening, M C Enright, M G Morgan, H McKenzie

Abstract
The clinical and epidemiological features of an outbreak of nosocomial Moraxella catarrhalis infection in a respiratory unit are described. Six isolates from five patients were shown to be indistinguishable by immunoblotting and restriction endonuclease analysis and different from 11 other, unrelated clinical strains.

Moraxella (Branhamella) catarrhalis is a Gram negative, oxidase positive coccus, which has been increasingly recognised as a respiratory tract pathogen during the 1980s, especially in patients with underlying lung disease. It most commonly causes exacerbations of chronic bronchitis but may also cause otitis media in children, conjunctivitis, or pneumonia.

This report describes the use of a combination of restriction endonuclease analysis (REA), immunoblotting, and SDS PAGE of whole cell proteins to examine six isolates of Moraxella catarrhalis from a cluster of infections among patients in a respiratory unit at the Northern General Hospital, Edinburgh.

Cases
The first case to be identified in this cluster of infections was in a 52 year old man with longstanding asthma. He was admitted to the respiratory unit with right sided chest pain and increasing dyspnoea. On admission his sputum was mucoid and culture yielded community flora only. He was treated for an exacerbation of his asthma and investigated for a possible pulmonary embolus. Ten days later he developed a cough producing purulent sputum, from which a heavy growth of β-lactamase producing M. catarrhalis (isolate 1) was cultured. The organism was identified by hydrolysis of tributyrin. The isolate was resistant to amoxicillin, but sensitive to coamoxyclav, erythromycin, and chloramphenicol. Before the bacteriological results were available he was treated empirically with oral amoxicillin 250 mg four times daily, but he failed to respond clinically. A second sputum sample, collected while he was having amoxicillin, also yielded β-lactamase producing M. catarrhalis, with the same antibiotic sensitivity pattern (isolate 2). At this point his antibiotic treatment was changed to oral ciprofloxacin, 750 mg twice daily for seven days, followed by co-trimoxazole 960 mg twice daily for a further week. With this treatment his symptoms gradually improved and he was discharged.

Four days before his discharge a heavy growth of β-lactamase positive M. catarrhalis was isolated as the sole pathogen from sputum specimens collected from four other patients on the ward (isolates 3–6). These isolates all had the same antibiogram as the isolates from the index case. All four patients had unexpectedly developed acute respiratory tract infections during the course of a single weekend, with symptoms of cough productive of large amounts of purulent sputum, but no evidence of pneumonia. The timing of these events in relation to the index case and the underlying diagnoses of the patients are shown in figure 1. The duration of their stay in hospital before the onset of these symptoms ranged from six to 25 days.

All the patients had started treatment with amoxicillin when they developed symptoms, in accordance with the unit’s policy on antibiotics. Once the bacteriological results were available their treatment was changed to oral co-amoxiclav and thereafter their symptoms resolved rapidly. The discharge of one patient was delayed for four days as a consequence of this infection.

Because of the striking clustering of these cases we decided to look for more widespread carriage of M. catarrhalis, but nose and throat swabs collected from symptomless patients were all negative. In view of the rapid response of the symptomatic patients to coamoxiclav, and the failure to find M. catarrhalis during screening, no specific measures of infection control were instituted, and no further cases were identified.

Typing of isolates
The six isolates of M. catarrhalis, together with 11 unrelated clinical strains, were examined at Aberdeen University by immunoblotting...
Severe bleomycin lung toxicity: reversal with high dose corticosteroids

J Maher, P A Daly

Abstract

A 42 year old man, treated for testicular carcinoma with combination chemotherapy that included bleomycin, developed life threatening interstitial pneumonitis. He recovered successfully after treatment with very high doses of corticosteroids and azathioprine. This report suggests that bleomycin lung toxicity may be reversible if treated aggressively.
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