

## ***Haemophilus influenzae* lobar pneumonia in the father of a child with epiglottitis**

H. Manji, P. Reeve

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**ABSTRACT:** We present a case of *Haemophilus influenzae* lobar pneumonia in the father of a child admitted with acute epiglottitis caused by the same organism. The suggestion that adult, as well as child, contacts for *Haemophilus influenzae* epiglottitis should be prophylactically treated is discussed.

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Dept of Medicine, Ipswich Hospital, Ipswich, Suffolk.

Correspondence: H Manji, Reta Lila Institute, Jules Thom Building, Middlesex Hospital, London W1N 8AA, UK.

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There have been occasional reports of multiple cases of *Haemophilus influenzae* infections in households since 1909, but until recently it was believed that *H. influenzae* infrequently caused disease in close contacts. The risk to contacts is said to be negligible in subjects over 5 yrs of age [1]. We report a case of *H. influenzae* lobar pneumonia in the father of a one yr old child with *H. influenzae* type b epiglottitis.

### **Case report**

A 31 yr old man, a nonsmoker, was admitted as an emergency with a 24 h history of cough and right sided pleuritic chest pain. For 12 days he had been feverish and generally unwell with "flu-like" symptoms. On examination the patient had a temperature of 38°C and a regular pulse of 112 beats per minute with a blood pressure of 90/60 mmHg. He had a dry unproductive cough with signs of right lower lobe consolidation.

Investigations on admission showed a haemoglobin concentration of 142 g·l<sup>-1</sup>, white cell count 3.3×10<sup>9</sup> L (86% neutrophils with left shift and toxic granulation) and an erythrocyte sedimentation rate of 111 mm in the first hour. A chest radiograph showed complete consolidation of the right lower lobe. Treatment with Benzylpenicillin was changed to Amoxycillin when *H. influenzae* type b was cultured from his blood. The patient made a rapid and full recovery. Subsequently, we found that the patient's 30 mth old son had been admitted 21 days earlier to the same hospital's ITU with acute epiglottitis; *H. influenzae* type b had been grown from his blood culture. A sibling, but not his parents, had received prophylaxis with Rifampicin.

### **Discussion**

Several recent studies have demonstrated a high risk of infection for household contacts of children with *H. influenzae* systemic disease [2]. The overall secondary attack rate is 585 times higher than the endemic risk for contacts of patients with meningococcal disease. The risk is markedly age dependant, being higher for children under 2, and negligible for contacts older than 5 yrs. The risk of disease is similarly greater in children from meningococcal infection but the prevalence of carriage may be higher among adults. A study of chemoprophylaxis of contacts with children with *H. influenzae* type b infection using Rifampicin appears to show a significant reduction in secondary infections. It was proposed that all households and day-care contacts be treated regardless of age, because of the carrier rate in asymptomatic exposed adult contacts (11% of household contacts). This recommendation has not been universally accepted, and the study has been criticized for methodological problems. Until further evidence is available it has been suggested that whether or not prophylaxis is used, the infant contacts of the patient must be determined and their parents advised on a course of action in the event that they become ill [3].

Although *H. influenzae* is usually regarded as a lower respiratory tract pathogen in patients with chronic lung disease, the first report of *H. influenzae* pneumonia in an adult was from the USA and most subsequent reports have been from the same country. The incidence is probably rising and it is postulated that this is due to declining "herd immunity" to the organism [4].

In a British study of 15 adults (14 of whom were previously fit) with community acquired pneumonia,

*H. influenzae* was the only pathogen isolated. Of these, only two had classical signs of consolidation and only one grew *H. influenzae* type b from blood cultures [5]. However, no mention was made in these patients of contacts with ill children.

Our patient is unusual in developing both lobar pneumonia and bacteraemia due to *H. influenzae* and secondly in being the adult contact of an index paediatric case. The possibility of *H. influenzae* should be considered in all adults with pneumonia who have had recent contacts with children with respiratory tract infections.

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*Pneumonie lobaire à Haemophilus influenzae chez le père d'un enfant atteint d'épiglottite. H. Manji, P. Reeve.*

RÉSUMÉ: Nous présentons une observation de pneumonie lobaire à *Haemophilus influenzae* chez le père d'un enfant admis pour épiglottite aiguë causée par le même organisme. Nous discutons la suggestion que les adultes, aussi bien que les enfants, en contact avec une épiglottite due à *Haemophilus influenzae*, devraient recevoir un traitement prophylactique. *Eur Respir J.*, 1990, 3, 840-841.