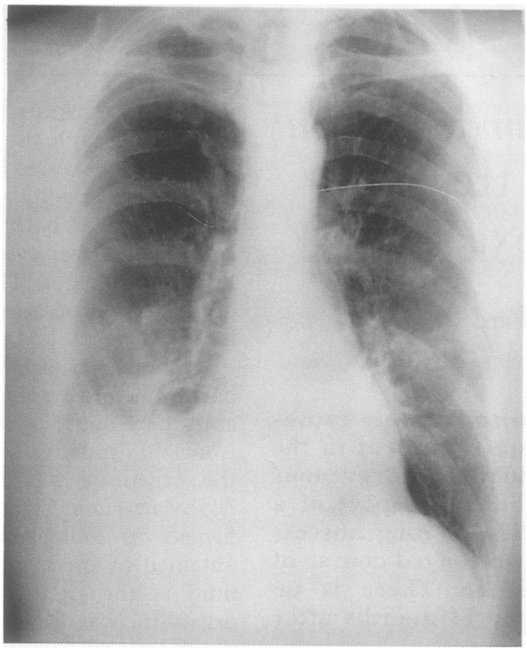

*Figure 2 Chest radiograph after nine months' treatment.*

be no doubt that in this case the organism was acting as a pathogen. *M fortuitum* was isolated from sputum on several occasions and from a direct percutaneous aspirate. No other organisms were isolated. This appears to be the first lung abscess due to *M fortuitum* that resolved with ciprofloxacin alone.

*M fortuitum* has been shown to be responsible for several skin and soft tissue infections.[1 2 4 7] In the lungs *M fortuitum* is known to cause pneumonia, abscess, and empyema,[3] usually in patients with chronic pulmonary disease, such as pneumoconiosis or emphysema, or a history of chronic aspiration.[1 2 4] Our patient had bullae at both lung bases on the computed tomogram, but no other predisposing cause was identified.

The treatment of *M fortuitum* is not well established. It usually requires a combination of antimicrobial treatment and surgical débridement.[3 4] The suggested antimicrobial treatment has been amikacin and cefoxitin for at least six weeks, the time depending on the severity of the disease.[3] Ciprofloxacin and other fluorinated quinolones have been shown to be active against *M fortuitum* in vitro.[5 6] Ciprofloxacin has been used in treating one patient with peritonitis[8] and another with disseminated disease affecting the lungs.[9] The related fluoroquinolone ofloxacin has also been used successfully in a case of *M fortuitum* lung infection.[10]

There is no consensus about the duration of treatment. Ciprofloxacin was continued for nine months in this patient; ofloxacin was given for a year.[10] Treatment for a shorter time may have produced a similar result.

We thank the Mycobacterial Reference Unit, University Hospital of Wales, for identifying the organism.


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# Computed tomography and magnetic resonance findings in lipoid pneumonia

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## Abstract
**A case of exogenous lipoid pneumonia was documented by computed tomography and magnetic resonance imaging. Although strongly suggesting the presence of fat on T1 weighted images, magnetic resonance does not produce images specific for this condition. Computed tomography is the best imaging modality for its diagnosis.**


Exogenous lipoid pneumonia may be difficult to diagnose because a history of oil ingestion is often missed, and also because the condition may mimic many other diseases, especially lung tumours.[1] We report a case in which computed tomography and magnetic resonance imaging were used in diagnosis.

## Case report
A 65 year old man was referred to our institution for a segmental collapse of the right upper lobe discovered on a routine chest radiograph (fig 1). Eliciting his history revealed that he had ingested mineral oil paraffin. Fibreoptic bronchoscopy did not show any macroscopic endo-

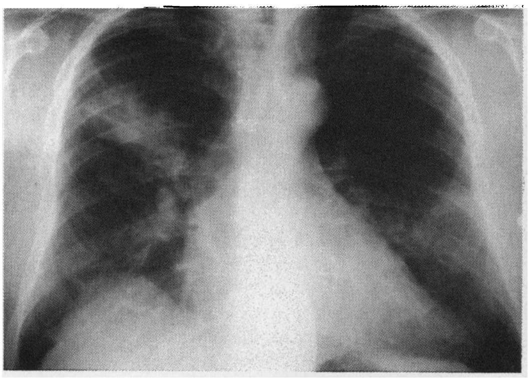

*Figure 1 Posteroanterior chest radiograph showing segmental collapse within the right upper lobe with infiltration in the left upper lobe.*

bronchial lesion. Lipid containing macrophages were present in the bronchoalveolar lavage fluid. Computed tomography performed with intravenous contrast showed distal right upper lobe collapse containing low fatty densities ranging from −68 to −110 Hounsfield units (HU) mixed with soft tissue densities (fig 2*a*). Non-specific infiltrates were visualised in the right middle lobe and the left upper lobe. Magnetic resonance was performed with a 0·5 T superconducting magnet (CGR) with T1 cardiac gated (time repetition (TR) 717 ms, time echo (TE) 34 ms) and T2 (TR 2150, TE 50 and 100 ms) weighted images. T1 weighted images displayed high signal intensity (equal to subcutaneous fat) mixed with medium signal intensity in the anterior segment of the right upper lobe, whereas medium signal intensity (close to muscle) was depicted in the right middle lobe and the left upper lobe (fig 2*b*). On T2 weighted images a high signal intensity in the fatty component was shown on the first echo (TE 50 ms), with signal intensity decreasing substantially on the second echo (TE 100 ms). Biopsy performed through a thoracotomy confirmed the diagnosis of lipoid pneumonia.

## Discussion

Bronchoalveolar lavage, percutaneous fine needle aspiration, or a biopsy performed via bronchoscopy or thoracotomy have been considered necessary to support the diagnosis of lipoid pneumonia.[1]

Although lower lobes are the most common sites of disease, oil droplets may affect other sites, especially the upper lobes as in our patient.[1,2]

Alveolar haemorrhage and inflammatory exudates are present in stages I and II of the disease.[2,3] Carillon *et al* have suggested that these lung lesions might modify attenuation values.[5] Computed tomography in our case and

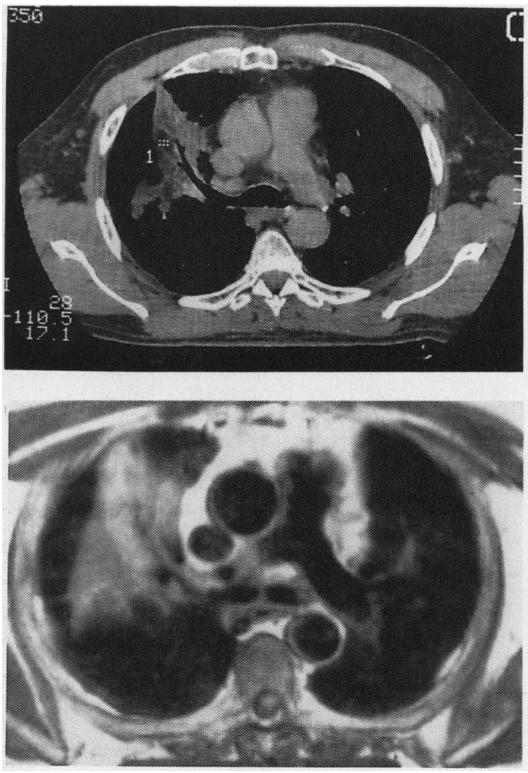


*Figure 2 (a) Computed tomogram showing fatty density (− 110 HU) in the right upper lobe lesion, which is specific for lipoid pneumonia. (b) Cardiac gated magnetic resonance (time repetition 717, time echo 34 ms) in the axial plane. High signal intensity mixed with intermediate signal intensity is seen in the right upper lobe.*

others shows densities ranging from −30 to −150 HU in at least one part of the affected lung. This feature should be considered as specific for lipoid pneumonia.[4-6]

Only one case of lipoid pneumonia explored by magnetic resonance has been published.[5] Because high signal intensity on T1 weighted images may be due to blood as well as fat, we do not agree that the magnetic resonance abnormality is specific for this condition. Our case confirms that computed tomography is the best imaging modality for diagnosing lipoid pneumonia. Magnetic resonance does not give specific images.

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