TALC GRANULOMATOUS DISEASE

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CASE REPORT

A 44-year-old woman presented with persistent cough, dyspnoea and copious sputum production. Physical examination showed tachycardia, tachypnoea and widespread polyphonic wheeze but no other signs, a chest X-ray showed diffuse micronodular shadowing, and a high resolution CT scan showed a 'tree in bud' appearance suggesting bronchiolitis. A lung biopsy led to a diagnosis of talc granulomatous disease. Twenty years previously she had worked as a dental technician when fine-grained talc was used in producing a high lustre on plaster models of teeth.

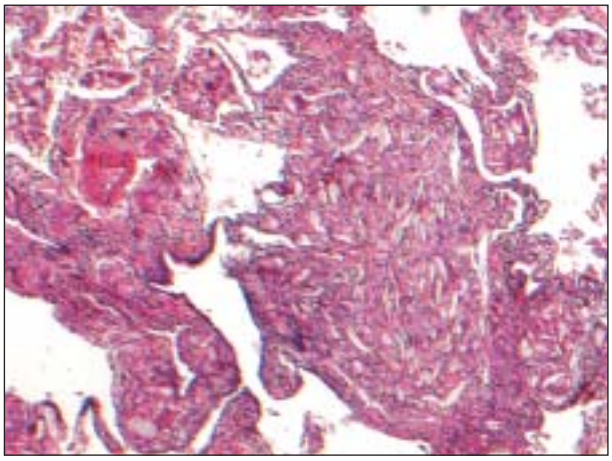

FIGURE 1

Video-assisted thoracoscopic lung biopsy showing nodular granulomatous infiltrates and surrounding fibrosis in the lung parenchyma and within the bronchioles.

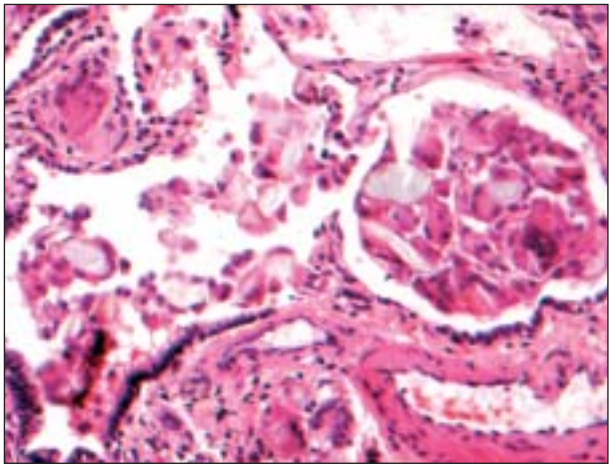

FIGURE 2

Polarisation revealing positively birefringent talc crystals lying within foreign body-type giant cells.

DISCUSSION

The histological features of talc granulomatous disease consist typically of variable degrees of perivascular and peribronchial fibrosis (Figure 1) with positively birefringent dust particles (Figure 2).[1,2] Stellate interstitial collections of talc granulomas extend around the bronchioles (Figure 2) with secondary inflammatory changes. This bronchiolitis contributes to the clinical features of dyspnoea, cough and sputum production. The most important sequelae are pulmonary fibrosis and pulmonary hypertension. The degree of perivascular granulomatous infiltration correlates with the presence of pulmonary hypertension.[2] There is no increased risk of lung cancer.[1] Occupational exposure typically occurs as inhalation due to mining or processing of talc for cosmetic use. Talc is also used in paint, ceramics, roofing-products, textiles, rubber lubricants, water filtration and insecticides. Intravenous injection of adulterated narcotics and stimulants is also an often forgotten cause. Radiologically, bilateral reticulonodular infiltrates occur in the lower lung fields with pleural abnormalities and lymphadenopathy similar to those described in intravenous drug users. Sometimes there may only be a non-specific 'tree in bud' appearance in keeping with a bronchiolitis (Figure 3).[2]

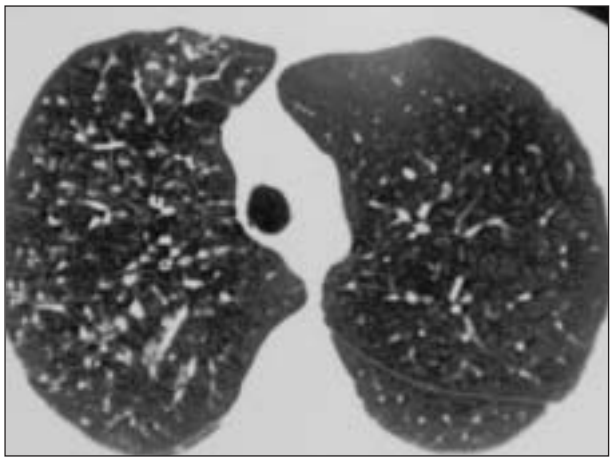

FIGURE 3

'Tree in bud' appearance on high-resolution CT scan in keeping with bronchiolitis.

REFERENCES

1 Gong H. Uncommon causes of occupational interstitial lung diseases. *Curr Opin Pulm Med* 1996; **2:**405–11.

2 Marinelli WA, Davies SF. Granulomatous diseases of the lung that mimic respiratory infections. *Semin Respir Infect* 1988; **3(3):**181–202.