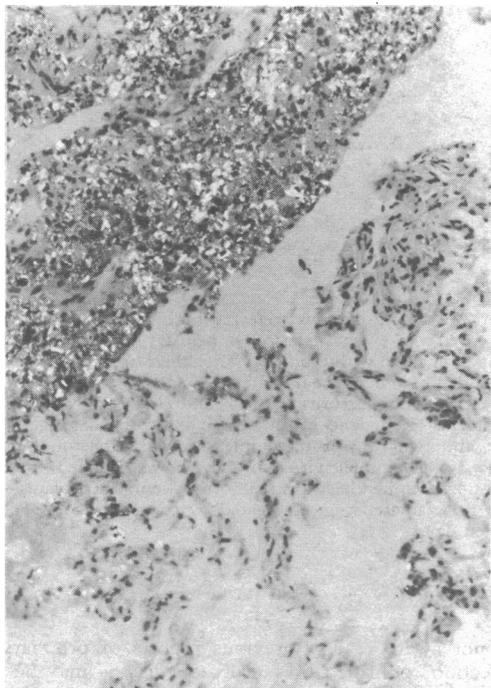


the pulmonary shadowing. Microscopy of the biopsy sample showed large numbers of birefringent needle shaped dust particles associated with nodular interstitial fibrosis (figure), analysis of which, using energy dispersive x ray analysis in an electron microscope,² showed that the particles were made up of muscovite, quartz, kaolin, and rutile with small quantities of feldspar and actinolite; exact measurement was not possible because of the small amount of material available. Results of bulk chemical analysis of the dust deposits were: silica 58.4%; aluminium oxide 20.5%; titanium dioxide 1.5%; iron oxide 9.3%; manganese oxide 0.3%; magnesium oxide 2.9%; sodium oxide 1.7%; and potassium oxide 5.4%.



Transbronchial biopsy sample showing edge of collagenous area and birefringent dust particles. Normal lung seen at bottom of picture. Haematoxylin and eosin stain under polarising light $\times 160$ (original magnification).

The finding of nodular pulmonary fibrosis in association with mineral crystals, 58% of which were silica, confirmed the diagnosis of silicosis. He had been exposed to considerable quantities of dust while working with cattle and behind ox drawn ploughs on the dry soil of the Shorkut region, but a detailed history from both him and his relatives failed to elucidate any other industrial or domestic dust exposure or the use of stone grinding equipment.

Comment

We concluded that this man developed pneumoconiosis through exposure to environmental dust during a lifetime of farming, the composition of the dust in his lungs—predominantly quartz and clay minerals—being compatible with the diagnosis. Farming does not feature in any list of occupations associated with silicosis, and our diagnosis would have been missed without appropriate histological examination. This emphasises the importance of transbronchial lung biopsy in diagnosing diffuse pulmonary shadowing and the usefulness of dispersive chest x ray analysis in identifying dust in the lung.

Environmental dust disease is not unknown in agricultural workers. A group of Bulgarian farmers working on soils containing high levels of anthophyllite, tremolite, and sepiolite were found to have a high incidence of pleural plaques.¹ In the hot dry climate the soil formed dust with a high fibrous particle content. Silicate pneumoconiosis with interstitial fibrosis but no nodular fibrosis has been described in six agricultural workers in California, five of whom worked in vineyards.³ The silica was mainly derived from mica, commonly used as a vehicle for soil additives and pesticides, and the authors speculated that it may have been a marker for toxic soil additives or pesticides. Our patient had never been exposed to such compounds, and his pulmonary fibrosis was a direct result of the inhaled silica. Silicosis has been described in forestry workers in Russia, where the soil was

particularly sandy and high concentrations of silica were found in the atmosphere of their tractor cabs.⁴

Agricultural pneumoconiosis should therefore be recognised as a distinct entity that may give rise to x ray shadows similar to those in miliary tuberculosis. It should be considered in immigrants presenting with such chest x ray appearances and a history of farming.

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(Accepted 29 April 1983)

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Lactation in diabetic women

Most mothers in Britain now breast feed their infants.¹ There is, however, little information on lactation in diabetics and its effects on insulin requirements.²

Subjects and results

We studied 48 insulin dependent diabetics delivered at King's College Hospital, London, to assess the factors affecting lactation in diabetics. There were 20 primiparous and 28 multiparous diabetics (age range 23-40), predominantly (42/48) from the non-manual social classes. The duration of diabetes ranged from two to 33 years; 15 women had background retinopathy. They were interviewed before discharge from hospital after delivery and three months later in the outpatient department. The carbohydrate allowance was increased from a mean of 138 g before pregnancy to 188 g during lactation as a contribution to the energy needed to produce the daily average of 50 g carbohydrate (lactose) in the breast milk. No other special advice was given.

Some 42 diabetic mothers chose to breast feed, and 36 of them were still breast feeding at two weeks, 32 at six weeks, and 27 at three months. These results compare favourably with those in non-diabetic mothers.³ Martin and Monk reported that at six weeks 46% of all mothers were breast feeding in south east England,¹ compared with our figure of 76% of the diabetic mothers.

The most important factor for successful lactation was that breast feeding should start very shortly after delivery. In common with the infants of non-diabetic mothers,¹ those infants of diabetic mothers first put to the breast more than 12 hours after delivery were more likely to be weaned before three months ($\chi^2=4.32$, $p<0.05$; see table).

A change in hospital policy one third of the way through the study meant that few infants were separated from their mothers and taken to the special care baby unit.⁴ This change was accompanied by increases from 41% to 60% in the number of infants first suckled within 12 hours of delivery and from 53% to 70% in the prevalence of breast feeding at three months. Fewer mothers complained of difficulty in getting the infant to grasp the nipple and suck well when breast feeding was initiated early. The diabetic mothers weaned their infants from the breast for the same reasons as non-diabetic mothers, mainly that the supply of milk was insufficient and that the baby refused to suck.^{1,3} At three months after delivery the mean daily insulin requirement was 43 units compared with 50 units before pregnancy in mothers who were bottle feeding and also lower (40 units,

Time of first suckling and duration of lactation. Figures in parentheses are numbers in each group who had difficulty with suckling

Hours after birth:	0-6	-12	-18	-24	-30	-36
Breast feeding at 3 months	13 (1)	5 (1)	1	8 (4)	0	0
Weaned before 3 months	4 (1)	1 (1)	4 (4)	3 (1)	0	3 (3)

compared with 45 units before pregnancy) in the lactating group despite the increased carbohydrate allowance.

All but two of the diabetic mothers were delivered between 37 and 39 weeks' gestation; 26 (54%) were delivered by caesarean section, 11 (23%) had a forceps delivery, and 11 had a normal delivery. This compares with national rates for non-diabetics of 14% having forceps and 9% caesarean deliveries.¹ Neither the mode of delivery, gestational age, birth weight, duration of diabetes, nor the presence of retinopathy affected the choice of infant feeding or duration of lactation.

Comment

The results show that diabetic women allowed an additional 50 g carbohydrate in the daily diet can breast feed as successfully as non-diabetic women and that the problems they encounter are similar.

We thank Dr D A Pyke, Dr Peter Watkins, Dr Harold Gamsu, and Mr Michael Brudenell for allowing us to study their patients and Miss M Tully for help.

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(Accepted 24 May 1983)

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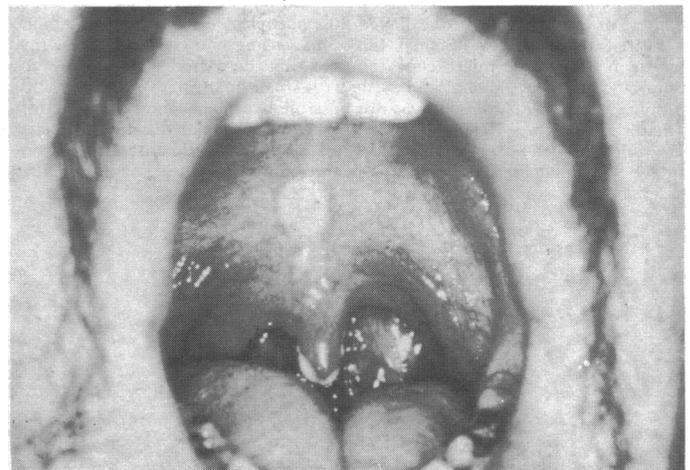
Oropharyngeal *Haemophilus ducreyi* infection

Extragenital chancroid is rare. We report on three patients with the condition in whom *Haemophilus ducreyi* was isolated from the oropharynx.

Case reports

Case 1—A 23 year old homosexual man presented with a sore throat of five days' duration that had started two days after anogenital and mutual orogenital contact with a casual partner. Examination showed no clinical or microbiological evidence of anogenital infection. The buccal mucosa was hyperaemic and showed adherent candidal plaques, and there were three painful palatal ulcers (figure). Dark field microscopy of the abraded ulcers did not show *Treponema pallidum* but showed typical budding forms of *Candida albicans*, which was also recovered in culture. *H ducreyi* was isolated from a swab of purulent exudate from the ulcer bases directly plated on to modified haemin medium and incubated for 48 hours at 33°C in 5% carbon dioxide.¹ The isolate's identity was confirmed by typical colonial morphology, Gram stained appearance, starch aggregation, requirement for X but not V factor, and positive results of tests for alkaline phosphatase and nitrate reduction. It did not produce β -lactamase. Culture and serological investigations gave no evidence of other ulcer pathogens. Although nystatin oral suspension rapidly cleared the adjacent candidal lesions, the palatal ulcers took 16 days to heal. *H ducreyi* was reisolated from the now healthy oropharynx four weeks later but was successfully eradicated by co-trimoxazole 960 mg twice daily for seven days.

Case 2—A 29 year old man presented with penile sores of two days' duration. He gave a three year history of recurring genital ulcers after peno-vaginal and orogenital contact with a prostitute in Bangkok, when he had simultaneously acquired gonorrhoea and genital herpes. Both herpes simplex virus (HSV 2) and *H ducreyi* were isolated from his penile ulcers, which resolved after seven days of saline bathing alone. He was without signs of infection at reattendance four weeks later, when separate swabs were taken from the urethra, subpreputial sac, and oropharynx (because of the history of orogenital contact). A β -lactamase producing strain of *H ducreyi* was isolated from all three sites. He was treated with erythromycin 1 g daily for 14 days. Subsequent attempts to isolate the organism were unsuccessful, although his genital herpes recurred.



Ulcers on soft palate and uvula from which *C albicans* and *H ducreyi* were isolated.

Case 3—A 27 year old man was referred by his girlfriend one week after she had presented with extensive lesions of primary genital herpes. Her initial symptoms had appeared within one day after their having mutual orogenital contact. Both denied other sexual contact, or partners, within the preceding 12 months. Herpes simplex virus (HSV 1) and *H ducreyi* were isolated from her vulval ulcers. He had no history or signs of oropharyngeal or genital abnormality, although two serum samples showed persisting high levels of antibodies to herpes simplex virus. *H ducreyi* was isolated from his oropharynx but not from penile swabs. In both patients the isolates, which did not produce β -lactamase, were eradicated by co-trimoxazole 960 mg twice daily for seven days.

Comment

We are not aware of any previous reports of oropharyngeal *H ducreyi* infection confirmed by culture. *H ducreyi* may be found in genital ulcers caused by herpes simplex virus,¹ and asymptomatic carriage occurs.² The pathogenic importance of our observations is uncertain. In case 1 the organism may have been a secondary bacterial invader causing delayed resolution of buccal candidal lesions, whereas longstanding asymptomatic carriage was likely in the two other patients. In case 2 the infection was probably acquired in the Far East, where β -lactamase producing strains of *H ducreyi*, often showing multiple antibiotic resistance, are common.³⁻⁵

Further study is required of the oropharynx as a reservoir of both symptomatic and asymptomatic *H ducreyi* infection.

This work was supported by a grant from the special trustees to the former united Sheffield hospitals.

We thank Hazel Bland for typing the manuscript.

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(Accepted 18 May 1983)

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