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## CLINICAL NOTE

### *Psittacosis presenting with acute pleuritic pain*

#### A report of two cases

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PSITTACOSIS IS A SPECIFIC INFECTIOUS disease, widespread in the avian population. The name originated from early descriptions in birds of the parrot family but the condition is also found in domestic fowls, pigeons, pheasants and numerous other birds, making the name ornithosis more apt. Human infection is generally acquired by inhalation of infected, dried, bird excreta, by handling the feathers or tissues of infected birds, or rarely by person-to-person spread (Rogers 1967).

The illness in man may be asymptomatic. On the other hand it may mimic influenza, typhoid or varying respiratory tract infections and can be fatal.

Four hundred and nine cases of reported infections by organisms of the *Bedsoniae* group, which includes psittacosis and lymphogranuloma venereum (LGV), occurring in the United Kingdom and Eire during 1967-69, were recently reviewed in the *British Medical Journal* (1970). The criteria for inclusion in this report were a four-fold or greater rise in the titre of the complement-fixing antibody to the group antigen (psittacosis/LGV, CFT) or if only a single convalescent serum was tested an antibody titre equal to or greater than 160\*, supported by a history of recent illness clinically compatible with psittacosis.

#### Case reports

**Case 1.** A 22-year-old housewife and part-time domestic worker came to the surgery in November 1968, complaining of right pleuritic pain of a few hours' duration. She was

\*All titres expressed as reciprocals.

afebrile and on examination of the chest a pleural rub was heard on the right side without any other adventitious sounds. Nineteen days previously an evacuation of the uterus had been carried out for an incomplete miscarriage and the family doctor's differential diagnosis at this time was between simple pleurisy and pulmonary infarction. No other abnormality was found and treatment was initiated with tetracycline 2 gm daily.

The following investigations were carried out: Haemoglobin (Hb) 11.6 gm/100 ml, erythrocyte sedimentation rate (ESR) 41 mm/hr, white cell count (wbc) 9,600/cu mm and the first serum was taken for virological examination.

Subsequent progress was uneventful apart from a slight dry cough developing and the patient remained abulant, although off work until the twenty-fourth day. A chest x-ray on the eleventh day was normal. On the twenty-first day she developed a 'herald patch' which was followed by the widespread rash of pityriasis rosea. Further blood specimens on day 23 gave the following results: Psittacosis/LGV, CFT rose from a titre of 32 to 512, without any rise being demonstrated in the CFTs to influenza, A.B. or C, Sendai, parainfluenza 1, adenoviruses, respiratory syncytial virus, Q-fever or mycoplasma pneumoniae.

The patient lived with her mother and infant daughter who remained well and their sera gave negative results for psittacosis. The family owned a budgerigar which they had had for four years and this bird appeared well. The patient was in the habit of feeding (town) pigeons on her windowsill and at least one pigeon used to feed off her hand.

**Case 2.** The second patient was a 33-year-old housewife, who came to the surgery in May 1969, complaining of leftsided chest pain and a short dry cough. The pain was worse on inspiration and of three days' duration. On examination no abnormal signs were found in the chest and the patient was afebrile. She was treated symptomatically for her complaints with paracetamol and Benylin. At this time a first serum was sent to the virological laboratory; other investigations were: Hb 11.1 gm/100 ml, ESR 105 mm/hr, wbc 8,200/cumm.

Seven days later she still had no abnormal chest signs detected but her cough was more troublesome. A second serum, that day, showed a rise in the psittacosis/LGV, CFT from 16 to 256, with no rise in the CFT of the other respiratory pathogens detailed in case 1. The haematological findings were now: Hb 10.3 gm/100 ml, ESR, 61 mm/hr and wbc 14,000/cumm. She eventually had her chest x-rayed on the twenty-sixth day of illness with a normal result.

After diagnosis the patient was treated with tetracycline 2 gm daily.

Her husband's serum was tested about three weeks after her illness started and showed no evidence of infection. He and their three children remained clinically well. Questioning about avian contacts revealed that the family had sublet an attic room to a man who kept eight pigeons there. Unfortunately he left with his birds during her illness and these could not be investigated. The patient also admitted that she was in the habit of feeding pigeons on her window sill.

#### Other serological results from the practice

These two cases occurring six months apart in the practice prompted a review of the results of specimens sent by the author to the virological laboratory and the psittacosis/LGV, CFT results over three years are shown in the table. One hundred and fifty seven patients had sera tested during or immediately after an acute respiratory illness as part of the virological investigation for that illness. Nine per cent had only a single convalescent serum examined and a few (3 per cent) were tested during more than one episode.

It can be seen from the table that only one other patient fitted the diagnostic criteria. This patient was a 35-year-old Pakistani woman with a lower respiratory tract infection. She had only recently arrived from her own country and spoke no English. As history taking was so difficult and as the test is not specific for psittacosis alone, no firm diagnosis was made.

#### Discussion

The serological findings of a significant rise in the psittacosis/LGV, CFT in the presence of a respiratory infection fit the diagnosis of psittacosis. In addition both patients had a history of contact with pigeons and it is known that apparently healthy birds can harbour the organisms.

TABLE I  
RESULTS OF PSITTACOSIS/L.G.V. C.F.T. JUNE 1966–MAY 1969

Age or sex	Rising titre ≥ 4-fold	Reciprocal of highest or only titre where no 4-fold rise found						Totals	Percentage tested of average popula- tion at risk*
		256	128	64	32	16	< 16		
0— .. ..	—	—	—	—	—	—	8	8	2.7
5— .. ..	—	—	—	—	—	2	22	24	3.0
15— .. ..	1	—	—	1	2	1	19	24	4.1
25— .. ..	1	1	—	1	3	15	51	72	7.2
45— .. ..	—	—	1	—	1	1	23	26	4.6
65 or more ..	—	—	—	—	—	1	2	3	1.1
Male .. ..	—	—	1	2	2	6	48	59	3.6
Female .. ..	2	1	—	—	4	14	77	98	5.2
Totals .. ..	2	1	1	2	6	20	125	157	4.5

\*Average of population at risk on 1st January 1967, 1968, 1969

The two women lived in adjoining streets only 100 yards from each other as the crow (or pigeon) flies.

The review of cases in the *British Medical Journal* (1970) lists pigeons as sources of infection in 11 of the 79 cases where the patient was said to have had contact with birds. Grist and McLean (1964) reported that 54 per cent of pigeons examined in a survey during pest control operations in Glasgow were infected with psittacosis. In the centre of a city pigeons, therefore, may well be the source of infection where no other cause is found. The risk cannot be great, as these authors comment 'despite the heavy soiling of many cities by the droppings of pigeons and starlings, it is unlikely that the labile ornithosis viruses remain viable for more than a short-time in such material'. Certainly the other patients investigated for a suspected viral respiratory infection in the practice revealed only the one other possible case of psittacosis, mentioned above.

While it may be easy to suspect this infection in a severely-ill bird-fancier, a mild sporadic case must presumably often be unrecognized. Certainly the diagnosis of these two patients was unexpected and only made on routine investigation. They were two of a series of 21 consecutive cases of pleurisy consulting the author in his practice and investigated virologically.

Dry pleurisy is not uncommon in general practice, Hodgkin (1966) giving a rate of about 5 per 1,000 patients per year. This clinical entity as a presenting feature of psittacosis, however, was considered rare enough to warrant reporting.

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