CARCINOMA OF THE BRONCHUS IN A BOY AGED 19

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(WITH SPECIAL PLATE)

The occurrence of carcinoma of the bronchus at the age of 19 is rare enough to be worthy of record. This condition usually occurs between the ages of 40 and 70 (Simpson, 1929), although several younger cases have been reported. Many writers have published series of cases of intrathoracic neoplasms with the age incidence.

Cases in the Literature

I have collected all the reported series of cases which could be found in the literature, after an exhaustive search, and compiled the following table to show the age of incidence.

Age	...	...	0-20	21-30	31-40	41-50	51-60	61-70	71-
Cases (2,110)	...	...	20	89	290	576	726	341	68
Percentage	...	...	0.95	4.22	1.74	27.3	34.41	16.16	3.22

These include series collected by Hill (1934), Harvey (1936), Rosedale and McKay (1936), Kramer and Som (1936), Arkin and Wagner (1936), McCrae, Funk, and Jackson (1927), Wasch and Epstein (1935), Rogers (1932), Atkin (1931), and Duguid (1927).

This table shows that the incidence is highest between the ages of 51 and 60—namely, 34.41 per cent. Over 60 per cent. of all cases occur between the ages of 40 and 60. Less than 1 per cent. occurred below the age of 20. Unfortunately no attempt has been made in these series to relate the pathological diagnosis to the age of the patient, and it is possible that some of the younger patients have been suffering from lymphosarcoma or Hodgkin's disease rather than carcinoma. Two of the writers, however, made observations of interest.

Bonser (1929) reported 170 cases of intrathoracic neoplasms, of which six patients were under the age of 21. She stated that two of the six were suffering from Hodgkin's disease, but the other four were not classified. The other writer is Atkin (1931), who from a survey of ninety-three cases suggested that oat-cell carcinoma tended to occur at an earlier age than squamous-cell carcinoma. In his series three patients were aged under 30 (the youngest being 21); each of these cases proved to be oat-cell carcinoma.

Clinical Record of Case

A boy electrician, aged 19, had had no previous illnesses and did not suffer from bronchitis; the family history was good. There was no history of familial tuberculosis. When first seen, early in June, 1936, he complained of cough, sputum, night sweats, and loss of weight. These symptoms dated from a cold, and had been present for some three months. On examination little could be found in the chest other than a few crepitations at the left apex. The patient was referred to the tuberculosis officer for examination; an x-ray film of the chest revealed no evidence of tuberculosis, but there was a faint rounded shadow in the left apex.

A fortnight later the patient was admitted to the Liverpool Royal Infirmary. Progress of the disease during this time had been rapid. The patient was now thin and emaciated; he had a cough and slight sputum, but no haemoptysis. Large

distended vessels were present on the chest and abdominal walls. There was some cyanosis, but the neck was not distended and the cough was not typical. Several small secondary nodules were present on the chest and abdominal walls, each about the size of a marble; they were situated in the superficial tissues, and were freely movable. The liver was hard and enlarged, extending as far as the umbilicus. The left side of the chest showed diminished movement, diminished vocal fremitus and vocal resonance, a dull percussion note, and diminished air entry with bronchial breathing at the apex. These signs were most marked at the apex, but were present to a less degree at the base. Examination of the sputum was negative.

X-ray examination of the chest revealed a large mass extending out from the left root into the lung with collapse of the lung due to bronchial obstruction. An x-ray examination after the introduction of lipiodol showed obstruction of the left bronchus due to a bronchogenic neoplasm. These x-ray films are reproduced (Special Plate). Following this discovery one of the metastases was removed from the chest wall, under local anaesthesia, for section. The pathological report was metastasis from oat-cell carcinoma of bronchus.

The patient went downhill rapidly, and died six weeks after admission to hospital. Unfortunately permission for a post-mortem examination could not be obtained. The diagnosis had, however, been fully settled by the metastasis removed for section.

Commentary

The main point of interest is, of course, the age of the patient. Other points to note are the complete absence of any aetiological factor and the similarity to pulmonary tuberculosis in the early stages. The differential diagnosis from this disease would have been impossible in the early stages without an x-ray picture, although later the diagnosis became obvious.

A final matter of interest was the occurrence of subcutaneous metastases, which are uncommon in this form of malignant disease, although metastases in general are common. In this connexion it may be pointed out that in a total of 420 cases, collected by Bonser (1929), Grove and Kramer (1926), and Maxwell (1930), in which the occurrence and site of metastases are reported, only nine cases showed involvement of the subcutaneous tissues.

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G. A. Metz (*Nederl. Tijdschr. Geneesk.*, January 30, 1937, p. 493) records the case of a man, aged 45, who developed symptoms of acute veronal poisoning after taking 9 grammes of veronal. Treatment consisted in administration of strychnine nitrite, of which sixty-six intravenous injections of a total of 599 mg. were given in the course of eight days. Delirium of six days' duration set in eight days after taking the drug, but subsequent recovery was uneventful. Traces of veronal persisted in the urine for fourteen days after it had been taken.

N. MUTCH: MEDICINAL KAOLIN IN FOOD POISONING

FIG. 1.—Deposit from kaolin, *British Pharmacopœia*. ($\times 300$.)

FIG. 2.—Deposit from purified proprietary kaolin. ($\times 300$.)

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FIG. 1.—X-ray showing large mass extending from left root with collapse of lung.

FIG. 2.—X-ray following introduction of lipiodol; showing obstruction of left bronchus with typical "rat-tail" deformity.