

HAEMOPTYSIS AS AN INDICATION FOR BRONCHOSCOPY

BY

S. J. MAC HALE

From Yardley Green Hospital, Birmingham

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It is generally agreed that any hope of improving the results of treatment of carcinoma of the bronchus depends to a large extent on the earlier diagnosis of the condition (Penta, 1948; Price Thomas, 1948). By such earlier diagnosis a radical excision of the lung may be carried out before the neoplasm has spread too widely to allow of cure.

Haemoptysis may be an early symptom of this disease, and may, in fact, bring the patient for advice before any other clinical or radiological evidence of the presence of the cancer exists. Therefore in any busy chest centre two questions constantly arise in relation to patients with unexplained haemoptysis: (1) Should all such patients be examined bronchoscopically? (2) If bronchoscopy is done and no abnormality is found to account for the haemoptysis, is it necessary to keep the patient under observation?

In an effort to answer these questions, I have reviewed all patients with the presenting symptom of haemoptysis bronchoscoped in the surgical department between April, 1948, and December, 1950, inclusive. Patients in whom the symptom was found to be due to tuberculosis or bronchiectasis have been excluded.

MATERIAL

Some selection of cases almost certainly occurred, since practically all the patients were referred to the surgical department by physicians.

In all, 115 patients were examined bronchoscopically, in whom haemoptysis was the symptom first mentioned in the "complaint," i.e., presumably the cause of such persons seeking medical advice. Six patients could not be traced and are therefore excluded from further consideration. The other 109 were followed up for a minimum of one year after bronchoscopy. The presumption is made that if no evidence of neoplasm is present

after that time, then the original haemoptysis was not due to carcinoma of the bronchus.

SEX.—Of 109 patients, 80 were male and 29 female.

AGE.—The numbers in each group are shown graphically in Fig. 1, and compared with the numbers bronchoscoped for other symptoms. It can be seen that the age distribution does not differ very much from the numbers bronchoscoped for other symptoms.

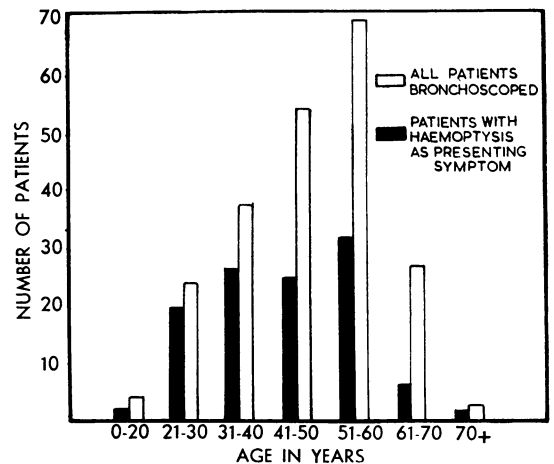


FIG. 1.—Diagram showing numbers of patients grouped by age.

DURATION OF HAEMOPTYSIS.—The time which elapsed between the first haemoptysis and the patient's attendance at the chest centre is shown in Fig. 2. The majority of patients attend within one month of developing this symptom.

RADIOLOGICAL CHANGES.—Radiological changes in chest films of 109 patients with haemoptysis are as follows:

No abnormality	51
Slight abnormality (not considered significant of disease)	20
Definite abnormality	38
	109

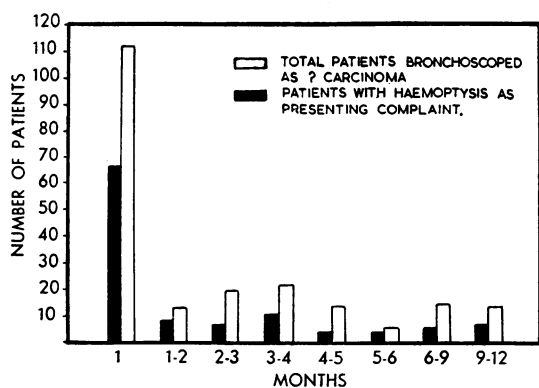


FIG. 2.—Diagram showing duration of symptoms before attending the chest clinic.

The group of 71 patients who had no radiological evidence of disease is that to which I wish to draw particular attention.

METHOD

These 109 people were bronchoscoped as out-patients. Local anaesthesia with 10% cocaine was used after testing for cocaine sensitivity. The patients were kept at the hospital until laryngeal sensation was fully recovered.

BRONCHOSCOPIC DIAGNOSIS IN 109 PATIENTS WITH HAEMOPTYSIS

	With X-ray Abnormality	Without X-ray Abnormality
Carcinoma of bronchus..	24	2
Adenoma of ..	3	1
Angioma ..	Nil	1
Tumour of vocal cords ..	1	Nil
"Middle lobe syndrome" ..	2	..
Hydatid cyst ..	1	..
No abnormality ..	7*	67
Total ..	38	71

* The shadows on radiology were considered inflammatory in five cases, due to silicotic nodule in one case, and to Eisenmenger's complex in one case.

Thus, of 71 patients with the symptom of haemoptysis and no other clinical or radiological evidence of disease, four were found to have tumours visible on bronchoscopic examination. Two males of 54 and 28 years had carcinoma of the bronchus, one female of 44 years an adenoma, and one female of 46 years an angioma.

The 67 patients in whom no abnormality was found bronchoscopically, clinically, or radiologically were followed up one to four years later. The results were:

No change ..	65
Carcinoma of bronchus ..	1
Dead (ovarian tumour) ..	1
Total ..	67

DISCUSSION

Sixty per cent. of people with carcinoma of the bronchus suffer from haemoptysis of some degree (Price Thomas, 1948). In most cases when this symptom is due to tumour, radiological changes will be present in the chest film. Marmet, Varin, Hertzog, and Hassan (1948) consider that the absence of radiological signs does not exclude the presence of a bronchial carcinoma. Martin (1948) goes so far as to state that "when a shadow appears on a roentgenograph the lesion (carcinoma of bronchus) is inoperable." Thoracic surgeons do not agree with this view, and expect to find radiological abnormalities in the majority of cases. This may be due to their insistence on multiple views of the chest. Reinhof (1948) states that abnormal radiological findings were present in 327 cases of carcinoma of the bronchi. Ochsner, De Bakey, Dunlap, and Richman (1948) make a similar observation in reporting 118 cases.

In this series of 71 patients with haemoptysis and an essentially clear chest radiograph I found four (5.7%) who had tumours. It is true to say, therefore, that bronchoscopy should be performed as a routine investigation in all cases of unexplained haemoptysis. I realize that not all bronchial carcinomata are visible bronchoscopically (Gibbon, Clerf, Herbut, and De Tuerk, 1948; Overholt and Rumel, 1940; Jackson and Könzelmann, 1934). If the growth is not in a major bronchus, however, it is very probable that it will give rise to an abnormal chest radiograph at an early stage, as it is growing in a small and easily blocked bronchus. I am aware also that this recommendation involves a considerable increase in the number of bronchoscopies which should be done. On the figures as I find them I regard this as essential.

The answer to the second question, the necessity of re-examining patients with haemoptysis who are negative on bronchoscopy, is not so clear. Only one patient passed as clear was later found to have carcinoma of the bronchus. It is possible that this was overlooked at bronchoscopy. It may be argued that the six untraced patients vitiate the results. These patients, however, did not die in Birmingham since their bronchoscopies. Furthermore, none of their names appear on the cancer register, which is kept in Birmingham and which covers all the hospitals of the city (Miss Levi, personal communication). One patient was examined four years ago, four patients three years ago, and only one patient as little as two years ago. It can be assumed that it is unlikely that they have developed bronchial carcinoma. Thus, of 67

patients passed as clear, only one actually had carcinoma of the bronchus when followed up. As I have stated, this may have been overlooked at the bronchoscopy. Personally, I do not intend to have patients with haemoptysis back for re-examination if bronchoscopy proves negative. My outlook on this is undoubtedly influenced by the strain such numerous re-examinations would place on a chest centre.

SUMMARY

One hundred and nine patients with the presenting symptom of haemoptysis were submitted to bronchoscopic examination.

Of 71 with no clinical or radiological evidence of disease, four were found to have tumours visible bronchoscopically.

The 67 patients with no bronchoscopic evidence of disease were followed up one to four years after that examination. One was found to have carcinoma of the bronchus.

It is recommended that all patients with unexplained haemoptysis should be submitted to bronchoscopic examination.

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