Avoidable Delay in Diagnosing Bronchial Carcinoma

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Prior to 1925 bronchiogenic carcinoma was considered a rare disease. Since that time malignant lesions arising primarily in the tracheobronchial tree have not only increased in number but have been recognized more frequently, as methods for diagnosis have improved. Along with improvements in diagnosis, surgical techniques have been perfected to the point that removal of a lobe of a lung or the entire lung can now be accomplished with acceptable mortality and with much less distress to the patient than that following the average abdominal exploration.

The most disturbing feature now is that at the time of examination such a large percentage of the growths are so far advanced that surgical exploration is unjustifiable, and of those considered operable prior to exploration only a third are found to be resectable with reasonable chance of permanent eradication.

Whereas it is true that many of the tumors arising in the bronchi are highly malignant and a large percentage of cures can not be expected from surgery, yet earlier diagnosis than at present would undoubtedly result in greatly improved surgical results. Too often, delay in diagnosis is attributed to failure of the family physician or the general practitioner to recognize features characteristic of primary bronchial carcinoma. I am convinced, however, that the same criticism is applicable to the roentgenologist and the physician and surgeon specializing in thoracic diseases.

Entirely too much emphasis is placed on laboratory procedures and specialized examinations in diagnosing bronchial carcinoma, whereas the alert clinician should be able by ordinary methods of examination to detect the lesion with much greater accuracy than is possible with specialized studies. To be sure, examination should be made of the sputum for bacilli of tuberculosis, malignant cells and fungi, but presence or absence of any of these should not cause the clinician to waver in diagnosing carcinoma of the bronchus on the basis of well established clinical signs and symptoms.

Recently one of my patients who had signs and symptoms of

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bronchial carcinoma probably became inoperable because of a delay of six weeks caused by the finding of what appeared to be significant fungi in the sputum and the failure to find malignant cells in secretion from the bronchi or to obtain positive tissue at bronchoscopic investigation. Surgical exploration of the tumor, which should have been performed six weeks previously, revealed a hopelessly inoperable lesion.

In another patient operated on recently three examinations of the sputum elsewhere had been thought to reveal bacilli of tuberculosis. Delay in diagnosis in this case was not prolonged because clinical examination revealed evidence that seemed to indicate carcinoma, and on operation a removable tumor was encountered. There was no evidence of tuberculosis in the tissue that was removed.

Failure to establish microscopic evidence of tumor by study of tissue or secretions should not deter the surgeon from exploring surgically an indeterminate pulmonary lesion. I should also add that he must be convinced of the diagnosis of carcinoma prior to operation, as absolute diagnosis at the time of exploration is rarely possible unless the lesion is already beyond the stage of resectability.

At the present time I consider bronchoscopic examination more a method of determining operability rather than an essential procedure in diagnosis of bronchial carcinoma, and yet I have been able to obtain positive tissue in 75 per cent of the patients suspected of having primary bronchial malignancy. Study of secretions from the bronchi for cancer cells is untrustworthy, and unless there is clinical evidence of carcinoma, such study should not be accepted as a reliable indication of the presence of tumor. In the hands of the most experienced workers, falsely positive determinations occur entirely too frequently to make this means of diagnosis as dependable as conclusions reached by ordinary clinical methods.

Not infrequently delay in diagnosis results from failure of the patient to consult a physician until the disease is too far advanced for successful surgical treatment.

Although I am not in agreement with those who attribute increase in bronchial carcinoma to smoking, particularly cigarettes, I am convinced that diagnosis is often delayed because chronic cough that has resulted from smoking masks onset of irritation from intrabronchial neoplasm. Advertisements in reputable medical journals proclaim that certain brands of cigarettes do not cause irritation of the mucous membrane of the respiratory tract, but smokers are well aware that such assertions are not true.

Wheezing, which is one of the early significant symptoms and
signs of bronchial carcinoma, is often attributed to asthma, and a physician is not consulted.

Unfortunately loss of weight is not one of the early evidences of bronchial carcinoma. As a matter of fact, many patients with bronchial carcinoma appear in excellent general physical condition, and not infrequently there has even been a gain in weight of as much as 25 pounds in the preceding two or three months.

Another reason for failure to recognize malignant bronchial disease is a hopeful attitude on the part of the physician that an indeterminate lesion in the lung cannot be malignant because the patient is such a "nice fellow." Intimate social relationships often make diagnosis of malignancy distasteful to the patient and the physician.

A frequent early manifestation of bronchial tumor is partial obstruction with infection, associated with fever, leukocytosis, and expectoration of purulent material which may or may not be discolored with blood. Penicillin reduces or eliminates the infection, the patient improves, and diagnosis may thereby be delayed for several months.

The diagnosis of unresolved or atypical pneumonia is one of the most common causes for delay in identifying bronchial tumor and should not be made until every diagnostic procedure has been employed to attempt to detect carcinoma and the patient has completely recovered from his illness.

During the past 10 years in only one of my patients who was operated on for suspected bronchial carcinoma was a malignant tumor not found. In this patient an extensive tuberculoma involving the middle lobe of the right lung and the surrounding lymphatic nodes, with attachment and extension to the pericardium, was thought to be carcinoma until microscopic examination of the tissue revealed tuberculous infection.

In numerous other cases malignant disease was found at operation when the lesion was thought to be benign prior to exploration, and in three patients malignant degeneration was encountered in the wall of infected cysts.

No doubt many patients have been denied possible beneficial results from surgery by the assumption that since the diagnosis of carcinoma could not be proved, indefinite pulmonary lesions must be inflammatory or benign in character. I believe that when in doubt as to the diagnosis of a chronic pulmonary lesion, operation should be recommended because carcinoma will be found in more than 90 per cent of such patients.

If unnecessary delay in diagnosing bronchial carcinoma is to be avoided, what should be the attitude of the general practitioner and the physician and surgeon specializing in thoracic diseases
regarding chronic pulmonary lesions of uncertain etiology? I should like to make the following suggestions.

Chronic persistent cough may result from irritation due to smoking, but persons who smoke should have careful examination of the lungs at fairly frequent intervals if malignant disease of the bronchi is to be detected early enough for surgical resection. A chronic cough that becomes more persistent, and especially if it is associated with wheezing or expectoration of streaks of blood, demands careful study.

Roentgenoscopic demonstration of a single mass in the parenchyma of the lung even without pulmonary signs or symptoms, particularly if there is evidence of osteo-arthropathy, is sufficient to justify surgery and removal of the affected lobe of the lung or the entire lung, depending upon the findings at operation.

Any infiltrative, unilateral lesion in the hilar area of the lung, associated with diminished or absent breath sounds over the corresponding area of the lung without appreciable change in percussion note, is sufficient for diagnosis of bronchial carcinoma. Other studies, such as examination of the sputum for organisms and malignant cells, as well as bronchoscopic investigation, should rarely be omitted in examination of a patient suspected of having bronchial malignant disease, but diagnosis can and should be made with extreme accuracy and without disastrous delay by also employing well known clinical methods of study.

Finally, I quote from Strumpell’s textbook of medicine, which was first published in 1886, and in which he writes in reference to primary malignant disease of the bronchus:

“In the cases observed by the author a striking diminution of the respiratory murmur over localized areas, despite normal pulmonary resonance, was often the first decided change in the physical signs.”

SUMMARY

1) Earlier diagnosis in primary bronchial malignant disease is necessary if operation is to provide increasingly satisfactory results.

2) Too frequently delay is occasioned by insisting on microscopic evidence of tumor and not accepting well known clinical findings that are at least equally trustworthy in diagnosis.

3) Chronic persistent cough frequently results from irritation due to smoking but persons who smoke should have careful examination of the lungs at fairly frequent intervals if malignant disease of the bronchi is to be detected early enough for surgical resection.

4) A chronic cough that becomes more persistent, and especially
If it is associated with wheezing or expectoration of streaks of blood, demands careful study.

5) Roentgenoscopic demonstration of a single mass in the parenchyma of the lung even without pulmonary signs or symptoms, particularly if there is evidence of osteo-arthropathy, is sufficient to justify surgery and removal of the affected lobe of the lung or the entire lung, depending upon the findings at operation.

6) Any infiltrative, unilateral lesion in the hilar area of the lung, associated with diminished or absent breath sounds over the corresponding area of the lung without appreciable change in percussion note, is sufficient for diagnosis of bronchial carcinoma.

RESUMEN

1) Para obtener un resultado satisfactorio con la operación, en las enfermedades malignas de los bronquios, es necesario el diagnóstico precoz.

2) Con mucha frecuencia el tratamiento es demorado, debido a la insistencia en obtener una evidencia microscópica del tumor, y porque no se aceptan conocidas evidencias clínicas, las cuales son tan seguras en el diagnóstico.

3) Frecuentemente, la tos crónica y persistente es debida a la irritación producida por el cigarrillo. Los fumadores deben ser sometidos a cuidadosos y frecuentes exámenes, si se desea hacer un diagnóstico precoz y extirpación quirúrgica, de las enfermedades malignas de los bronquios.

4) Una tos crónica y persistente, y especialmente cuando se asocia con cornejón y esputos hemoptoicos, exige un estudio serio.

5) La demostración radiológica, de una tumoración solitaria en el parénquima pulmonar, sin síntomas, y particularmente si está asociada con alguna osteo-artropatía, es suficiente como para justificar una exploración quirúrgica y la extirpación de un lóbulo o de todo el pulmón, de acuerdo a la indicación, en la mesa de operaciones.

6) Una lesión infiltrativa, unilateral en la región hilear del pulmón, asociada con disminución o ausencia del murmullo vesicular en la región correspondiente, aun sin cambios apreciables en la percusión es suficiente para hacer un diagnóstico de carcinoma bronquial.

REFERENCE