

**DIAGNOSIS OF CANCER OF THE LUNG—(Continued from page 15).**

more recently, is thought by many to be a contributing factor. Other infections have been discussed. Some men feel that there is no relationship at all between tuberculosis and primary cancer of the lung. Certain it is that tuberculosis and cancer may coexist.

There are some possible chemical factors. One interesting observation is that coincident with the building of oiled roads such as we have out all through this mountain district and through the state and the nation, there has been an increase in primary cancer of the lung.

Another interesting observation is the fact that, so far, primary cancer of the lung has not been encountered in the same degree in the Orient, where tarred roads are not in use, as it is here. Military gassing may possibly be a factor.

Increased longevity has been advanced as a possible reason along with other diseases which we are finding occur when people live long enough to develop them. Probably improved diagnosis is of some importance.

The diagnosis is still difficult because it is made often by bronchiectasis and pleural effusion.

*J. A. Sevier, M.D. (Colorado Springs):* There seems to be definite evidence that carcinoma of the lung is on the increase. This is probably a relative increase. In the first place, we are looking for it more commonly. We are taking more chest x-rays as a routine procedure, and we are getting more autopsies.

Hill of Edinburgh, in a recent account, has reviewed the subject of carcinoma up to November, 1934, and he finds that 8 per cent of all the carcinoma at autopsy is carcinoma of the lung. That seems a high figure.

As to the diagnosis, there are several facts that are fairly well established. First, we know that it occurs most commonly in the fifth and sixth decades of life. I think the common age is from fifty to fifty-five. It is much more common in males than in females—80 per cent males.

There seems to be no predilection at all as to which lung it attacks nor is there any predilection for any particular lobe of the lung.

Pleural effusion occurs in 33 per cent of the cases and is practically always a bloody effusion. It is most commonly confused with tuberculosis, lung abscess, Hodgkins' disease, aortic aneurism and pleurisy with effusion.

Clinically, there are several points of importance. First is the pain—in the chest as a rule—and this pain tends to increase rather than to abate as the disease goes on. Occasion-

ally there is prominence of the chest on that side.

If in addition there is evidence of pressure on the large vessels or pressure on the structures of the mediastinum in a patient with cough, shortness of breath and bloody expectoration from the beginning of the disease, we have a right to suspect cancer of the lung.

Also, if aneurism of the aorta can be fairly well ruled out and a bloody effusion is present, I think we have a fair right to assume that we are dealing with cancer of the lung. A positive diagnosis as to the nature of the tumor can only be made by detecting tumor shreds or so-called tumor cells in the sputum or in the effusion. Removal of a portion of this tumor by the aid of a bronchoscope of course will settle the situation as to the diagnosis—or the removal of a near-by infiltrated gland. Our greatest aids in diagnosis are bronchoscopy and x-ray.

*C. F. Hegner, M.D. (Denver):* I am glad that Dr. Giese emphasized the importance of the chronologic history of the case of primary carcinoma of the lung. Of course the symptoms depend upon the location of that tumor in its inception. Cough is a very important thing in the bronchia, but when we have parenchyma carcinoma it is strikingly absent. The character of the sputum is of course important.

First we have an irritated, non-productive cough; there is a glairy, viscid mucus and then possibly a prune juice sputum. In the parenchymal carcinoma we do not have the dominant cough as a symptom and it is surprising to know how long these people will remain comparatively well until the beginning of the complications which so confuse the diagnosis.

The diagnosis is made most likely from history. It is corroborated or confused by the x-ray until the middle of the course and it is absolutely confused by the complications late in the course.

The phenomena of the history, then, depend upon its location and its complication. That it is on the increase I am certain. Some years ago I spent some time with Dr. Sauerbruch; whenever he received a case from a certain section in Bohemia he always made a diagnosis of carcinoma and stuck to it until he proved it otherwise. That it is on the increase, relatively as well as absolutely, in this country, I am convinced.

I saw a number of cases with the late Dr. Bronfin. I operated on some and removed pieces of tissue that were taken from cases of empyema that didn't get well, and the diagnosis was made before anything was deduced from the history.

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