

THE NEED FOR DETAILED SPUTUM
REPORTS

SUPPLEMENTARY REPORT

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The bare statement in a laboratory report that the sputum does not contain tubercle bacilli gives the physician comparatively little help in arriving at a diagnosis, and may be absolutely misleading. It is important that he should have in addition some idea of the character of the sputum submitted by the patient. A dozen negative reports from mouth and throat specimens would be of less value to him than one report on a specimen that came from the lungs. The designation of the sputum as "mucoid" or "purulent" would be a helpful addition to the ordinary report, but a somewhat more detailed description of the macroscopic and microscopic characteristics of the specimen would be of still greater value.

In a previous communication,¹ a method of making reports was suggested, by the use of which, it was declared, the physician would be informed with some degree of certainty whether the specimen was derived from the upper air passages or was really from the lungs; in other words, he could tell whether the specimen was a "mouth" specimen or a "bronchial" specimen.

Under "macroscopic appearance" the specimen is described as watery, mucoid, mucopurulent, purulomucoid, purulent or bloody. If one of the other varieties is simply blood-streaked, the fact is noted; but the specimen is not called bloody unless it consists of pure blood.

In the microscopic examination, the presence or absence of tubercle bacilli is noted. Their number is estimated according to the Gaffky schema, and their arrangement is recorded if desired.

Under the heading "cells," particular attention is given to squamous epithelial cells and to pus cells (polynuclears). If the former are present in large numbers so that they are prominent elements in the picture, they are given precedence in the statement of cells present. On the other hand, if the pus cells are numerous they are recorded first. The presence of small round cells, alveolar cells, and, in appropriately stained specimens, of eosinophils, may also be mentioned. Mononuclear cells rarely form the majority of the elements present.

In regard to secondary organisms, a note is first made stating whether they are few or many. More details as to the varieties present may then be added.

A table of 541 examinations showed that there was a natural grouping of the specimens into four main classes. Since the publication of the article referred to, the number of cases in which the method has been applied, at the Adirondack Cottage Sanatorium and at Nopeming Sanatorium, has increased to 2,509, as shown in the accompanying table. (The summaries were made by Dr. George D. Heist and Samuel Marcus.)

The examinations were made by seven or eight different men, yet the results are substantially the same as in the first report. A mucopurulent sputum, con-

taining many pus cells and few secondary organisms, is in most cases a "bronchial" specimen, and if it does not contain tubercle bacilli, the doctor may be satisfied that the test was a fair one. If the specimen has been coughed up from the lungs, it is not usually much contaminated by mouth or throat secretions. On the other hand, a specimen may to the naked eye be almost equally purulent; but if under the microscope it contains many squamous epithelial cells and numerous secondary organisms, it is more likely to be derived from the throat or nose ("throat" specimen). In

TABLE SHOWING CHARACTER OF SPECIMENS OF SPUTUM
IN A SERIES OF TWENTY-FIVE HUNDRED AND
NINE CASES*

Type	Macroscopic Appearance	Cells Predominating	Secondary Organisms	T. B. +	T. B. —	Total	Per Cent. +	Per Cent. —
1	Watery or mucoid	Squamous epithelial cells	Many	19	338	407	4.7	95.3
2	Purulomucoid	Squamous epithelial cells	Many	48	421	469	10.2	89.8
3	Purulomucoid	Pus cells.....	Few	215	290	505	42.6	57.4
4	Mucopurulent	Pus cells.....	Few	452	223	675	68.4	31.6
5	.....	Other combinations	.....	130	323	453	28.7	71.3
	Totals.....	.....	.....	864	1,645	2,509	34.4	65.6

* The headings "T. B. +," "T. B. —," "Per cent. +," "Per cent. —" indicate, respectively, the presence and absence of tubercle bacilli. Types 1 and 2 are "mouth" or "throat" types; types 3 and 4, "bronchial" types.

catarrhal conditions of the nose and throat such specimens, thick and yellow in appearance, are frequently obtained. Watery and mucoid specimens, like the droplets emitted in ordinary coughing, in which sputum is not raised from the lungs, do not usually contain tubercle bacilli, and the acceptance of reports on such specimens as a basis for excluding a diagnosis of tuberculosis is an injustice to the patient.

STRANGULATED EPIGASTRIC HERNIA

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A man, aged 80, for a number of years had had a mass in the median line above the umbilicus. This mass, which evidently was an epigastric hernia, had suddenly shown evidences of strangulation, and it was in consequence of this that he was seen. The strangulation presumably had followed a bronchitis which had occasioned severe coughing. Operation was performed at once. The hernia was found to escape through an opening in the linea alba about 3 inches above the umbilicus. There was a distinct peritoneal sac, which, on being opened, disclosed a mass of omentum about the size of a small orange. This was ligated off and the hernial opening closed. The patient made a good recovery so far as the wound was concerned, although the bronchitis was considerably aggravated by the anesthetic, and in consequence of this he was quite ill for a number of days.

Epigastric hernia is, in comparison with the total number of hernias, infrequent, and strangulation of an epigastric hernia is particularly so. The percentage of the occurrence of epigastric hernia has been variously given as from 1 to 5 per cent. of all hernias.

1. Laird, Arthur T.: A Method for Increasing the Diagnostic Value of Sputum Reports, THE JOURNAL A. M. A., Jan. 23, 1909, p. 294.