

direction, is not always thorough and efficient; and there are many other laches and sanitary sins, both of omission and of commission, on the part of the weaker brethren of the profession.

But these are in a minority steadily becoming smaller. Constant pressure by the department through repeated warning and counsel—the holding up of burial permits—the reference of certificates to the coroner for investigation in aggravated cases—and other corrective, mainly educational, measures are remedying these defects, and the fact remains that an immense improvement has already been effected by this plan in the control of the communicable diseases in Chicago.

On the contagious-disease notification card of the Department provision is made for the report of tuberculosis, but it is "optional," and premises are never placarded or quarantined on such report. Cases of destitute consumptives, whose conditions are a menace to the neighborhood, are taken charge of, admission to such provision as exists—usually to Dunning—is secured, and the premises are disinfected by the Department. The foregoing is a reproduction of the notification card:

After being vacated, either by death or removal, premises that have been occupied by a consumptive are also disinfected by the Department on request of the attending physician; but such requests are not numerous, although increasing from year to year.

In this connection I would urge, as to Chicago, at least, that the attending physician should direct disinfection himself after tuberculosis—as well as after other contagious diseases—in families able to defray the expense, and should exact his fee for this service. This would largely relieve our overworked disinfecting corps and enable it to devote greater efforts to the destitute—those unable to pay—who, as a rule, require more thorough work than the well-to-do.

I do not understand why so many physicians delegate this part of their professional opportunities to public officials. In the nature of things, the attending physician is more valuable than any public official can be. From his frequent visits he is better informed as to the requirements and conditions of his case; he is relied on by the family as to advice and precautions necessary to prevent spread of the contagion to others; and he is either openly or covertly considered responsible for any spread, should it occur. These services are not taken into account in any fee bill; but if their value should come to be generally understood by the public their adequate compensation would naturally follow.

He is the most potent instructor of the public on the danger of infection generally, and of tuberculosis in particular, and I believe strongly that the public needs only to know what is necessary and wise to do to prevent tuberculosis, and all will be done that is useful. The best agency to this end is a wise, vigilant and energetic medical profession, properly taught in the medical colleges, and supported and reinforced by the medical press and the lay press as well.

Notification means policing, quarantines and force through public officials. Education means a reduction of the disease by intelligence and natural methods, and it teaches that the responsibility ultimately rests on the individual, who will be as zealous for the enforcement of preventive measures, when he knows and understands, as will be any public employee.

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THE CORRESPONDENT of the *Gazetta degli Ospedali* states that the average number of persons present at the section meetings of the International Medical Congress was not over seventeen.

## NECESSITY OF EXAMINATION OF THE SPUTUM IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.\*

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It has been wisely said that failure to make use of the well-recognized means of clinical investigation leads to more errors in diagnosis than does ignorance. The laity sometimes neglect to take advantage of the wonderful discovery of Jenner, and we wonder at their apathy. What shall we say of the physician who, in so serious a matter as the diagnosis of phthisis, neglects to make use of the simple and beautiful staining methods of Koch? The typical consumptive is a deplorably familiar spectacle. The layman thinks that he can recognize the disease at sight, but let no physician make this mistake.

Of the 1400 patients supposed to be in the advanced stages of pulmonary tuberculosis and sent to the Cook County Hospital for Consumptives from the various hospitals and physicians of Cook county, 120, or 8.5 per cent., have proved, after thorough investigation and prolonged observation, to be non-tuberculous. Some of the mistakes were practically unavoidable and were corrected only on the autopsy table; but in the vast majority of them a negative sputum examination, had it been made, would have led to a more careful physical examination and so revealed the true condition present. Except from a scientific standpoint many of the errors were of small consequence, the patients suffering from conditions even less curable than phthisis. In other cases the faulty diagnosis had deprived the patients of treatment which would have given much relief, if not positive cure.

The difficulty of recognizing incipient phthisis is admitted by all, but are we not too apt to pass lightly over a case presenting marked emaciation, cachexia, cough, hemoptysis, night sweats, with diffuse lung findings, and risk the error of a snap-shot diagnosis? To make a diagnosis of phthisis on the sputum examination alone indicates indolence; to depend on the physical examination without investigating the sputum microscopically shows overconfidence in one's diagnostic ability.

Note the following case:

J. A., Swede, dock laborer, aged 25 years, was admitted May, 1900, having been refused at one of the hospitals in this city because consumptive. Mother died of phthisis. Has been coughing three years, lost 28 pounds in weight; has had pain in chest, occasional night sweats and frequent small hemorrhages; profuse mucopurulent expectoration, loss of appetite, and some diarrhea. Temperature, 98 to 100 F.

Examination showed chest to be symmetrical; no retraction and no bulging; dullness with faint bronchial breathing and coarse râles over entire right lung. Left lung negative except a few scattered râles.

Without examination of the sputum this case might readily have passed for a well-marked tuberculosis of the right lung. However, repeated examinations of the abundant sputum showed the absence of tubercle bacilli, and lead to a more minute examination of the chest. Then it was noted that the dullness of the right lung, while marked throughout, was nearly absolute toward the base, and at times the expiratory sound over the sixth and seventh ribs in the posterior axillary line had an amphoric quality. An exploring needle inserted at

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this point yielded pus, and rib resection and pneumotomy, the next day, showed a lung abscess about the size of a small orange situated in the right lower lobe 3 c.m. beneath the pleural surface. The surrounding lung was carnified, and the abscess was draining very imperfectly through a bronchial opening in the upper wall. The incision was enlarged and a drainage tube inserted. The fever, cough and expectoration disappeared very rapidly, but the patient died at the end of a month from general amyloid disease—the result of having been neglected for three years on a mistaken diagnosis of phthisis.

As is well known, there is a certain small number of cases of fibroid phthisis so chronic in their nature as to yield no bacilli even after the most thorough and repeated examination of the sputum. These are readily recognized to be tuberculous by their prompt reaction to tuberculin. The presence of tubercle bacilli in the uncontaminated sputum is recognized as absolute proof of the tuberculous nature of the disease present; the absence of the bacilli does not prove the contrary. In my opinion, the converse is true of the tuberculin test. Reaction following the injection does not *absolutely* prove the presence of tuberculosis; but should reaction fail to follow the injection of so large a dose as 10 m. of a 2 per cent. solution, in my experience tuberculosis is excluded. The frequent occurrence of the so-called "false reaction," especially in syphilitics, has been to me confusing.

A list of the 120 cases mistaken for pulmonary tuberculosis is both interesting and profitable. The diagnosis of aneurysm and endocardial lesions was either made or confirmed by Prof. R. H. Babcock; of progressive pernicious anemia, by Prof. W. A. Evans, and the diagnosis of malignant disease was confirmed post-mortem.

The cases consisted of the following: Chronic bronchitis, usually with some complication increasing the anemia and prostration, e. g., exposure, senility, syphilis, gastritis, etc., 45; emphysema, with varying degrees of bronchitis, 12; bronchiectasis, 6; endocarditis—mitral 10, aortic 5, tricuspid 1, total 16; lung abscess, 2; empyema, 6; acute pneumonia (resolving), 6; aortic aneurysm, 3; goiter, 2; syphilis (?)—bronchitis 4, pleura 2, larynx 1, gumma of lung 1, total 8; passive congestion and edema of lungs—from cerebral hemorrhage 1, nephritis 2, cirrhosis of liver 2, total 5; malaria, 2; vicarious menstruation following oophorectomy, 2; secondary sarcoma of lung, 1; sarcoma of mediastinal glands, 1; progressive pernicious anemia, 1 subphrenic abscess following gunshot wound, 1; typhoid convalescence, 1.

## THE RIGHT OF THE STATE TO PROVIDE HOSPITALS.\*

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The paramount object of governments is the protection of their citizens in life, limb, property, and the pursuit of happiness; for this alone the individual pays tribute and renders fealty, and since a diseased person can not have the perfect enjoyment of either, it is manifest that not only does the state possess the inherent right to secure and preserve the health of its

inhabitants, but that such is, perhaps, the highest duty it owes them.

The power of the commonwealth to promulgate and enforce sanitary regulations for the prevention and spread of disease, and to establish and maintain hospitals and eleemosynary institutions for the treatment and care of its afflicted citizens, both directly and through the medium of its subsidiary governmental agencies, has been uniformly recognized by law-makers and unequivocally sustained by the judiciary. To show that this is considered one of the most important and vital functions of government, it is only necessary to point to the arbitrary power which the people, in their assembled wisdom, have seen fit to vest in public boards of health, who may prevent the going out or the coming in of the individual, confine him in a hospital and subject him by force to medical treatment; regulate, and even forbid, both the importation and exportation of merchandise; and in the most summary manner may condemn and destroy private property. In the exigent discharge of duty they deprive the citizen of his property and restrain his liberty, without invoking the aid of a court of law or granting a trial by jury—a right which no other power has in times of peace. Their authority seems to cease only at the taking of life.

The duty of the state extends to the adoption of all the means known to science for the prevention, cure, and eradication of dangerous diseases, while its power to do so is limited only by the legislative discretion and the ultimate resources of the community. It is not circumscribed by the treatment of diseases designated as contagious or infectious; in this respect the people have vested in the law-making power a discretion whose only limitations are that the provisions must be made for the public good and for public purposes, and so long as the legislature stays within these bounds their discretion is not subject to review by the judicial department. Some of the American states has gone so far as to undertake the care of inebriates, and have established, wholly or partly at public expense, asylums for their treatment.

It is, therefore, safe to assert that the law-making department of the government may say what disease it is for the public good to check by treatment at the expense of the state. It is undoubtedly not limited to the stage of disease; incipient sufferers may be cared for as well as those physically helpless. There is one limitation dependent on the character of the disease; it is this: that while the state may *forcibly* restrain and commit to a hospital a person afflicted by a contagious or infectious disease, the rights guaranteed the individual by our constitution would be infringed by an *involuntary* commitment when the malady is non-infectious.

It must be borne in mind that hospitals established by the state must be under its supervision, and *should* be open to all its citizens on the same terms; although they *may* be maintained for the indigent only. Taxes can not be legally levied for the purpose of donation to benevolent and charitable societies under the supervision of private individuals, and over which public authorities have no control; but it has been held that a municipality—and of course a state—may pay a part of the expense of a charitable institution, to which it has the right to send its citizens.

I have been asked whether it would be legal for a state to appropriate money for a sanatorium located beyond its territorial limits. A judicial determination of this exact question could not be found in the short time

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