

DR. N. L. WILSON, Elizabeth, N. J.—In regard to the application of alcohol, I had a child 6 years of age whom I kept under my observation three years. After trying almost everything, after scraping the growth out twice, tracheotomizing, intubating, and having the intubation tube fall down into the trachea, I finally made up my mind to leave the child alone and find out what nature would do, and the result is that the child is well. I had made applications of alcohol by spraying it into the larynx. The growth sprang from beneath the right true cord. That made me think our friend had possibly overdrawn it when he said that alcohol would cure these cases. I have had cases, however, where the growth sprang from the larynx above the cord, and by making these topical applications, preferably with the canula, I have seen the growth shrink. One case now under treatment is much better than three months ago, although as yet the patient is not cured of her papilloma.

DR. TAUT—It appears to me the latest treatment of papilloma has been entirely overlooked. Two years ago I intubated for this difficulty and finally did a tracheotomy, and then the child drifted out of my hands and is now under the care of the "Christian Scientists," and if the gentlemen will visit the Pan-American Congress I shall be very glad to report the results.

DR. MACKENZIE—I have nothing to add to what is already known on the subject. I will simply say in connection with the dissolution of these growths by topical applications, that I believe one of the best of all topical applications, alcohol included, is sulphate of zinc. I have used for a great number of years a combination of sulphate of zinc and other things, but the chief ingredient is the sulphate in the proportion of two or three grains to the ounce. Years ago, when I was in Bellevue Hospital, I used a preparation consisting of 16 or 17 grains of sulphate of zinc, about 2 ounces of compound spirits of lavender and about 6 ounces of water, which acted very satisfactorily in shriveling up venereal warts on the genital organ. Since then I have used a modification of the solution on the throat in shriveling up small remnants left after operation on the larynx and also after operations for adenoid growths. I think in most of these cases it will be necessary to do a preliminary tracheotomy or laryngotomy. Much time is lost in the futile attempt to remove such growths through the natural passage. Especially in small children no time should be lost in performing preliminary tracheotomy, splitting the thyroid and removing the disease in its entirety. We can accomplish much more in that way than in picking away at the larynx over a considerable length of time. My experience agrees with that of others, that the growths often disappear spontaneously after preliminary tracheotomy. But that requires time, and if time is an element I think the best plan is to split the larynx and remove the growth at once in its entirety.

DR. EMIL MAYER—The case presented by Dr. Gleitsmann has been mentioned and I can add a little to the subsequent history. Dr. Gleitsmann said the last he understood was that the man was dead. A year after he made that statement the patient walked into my clinic and I inquired why he had given the impression that he was dead. He said the Professor was so interested as to come all the way out to one of the adjoining townships from New York City that he thought something dreadful was going to happen and he hid himself and his people reported that he was dead. I tried all manner of persuasion to get a portion of the growth for examination, but the patient disappeared and I do not know where he is. So, gentlemen, the statement that he was presumed to be dead may be refuted; at least he was living one year after the paper was read.

DR. GIBB, closing the discussion—I am very glad to hear the report of so eminent a pathologist as Dr. Wright; it certainly adds weight to the opinion we had already given. I was likewise very much interested in Dr. Mayer's description of the termination of Dr. Gleitsmann's case. Anybody who reads how Dr. Gleitsmann chased this patient all over Brooklyn can appreciate the Doctor's remarks. I had hoped the discussion would take up, besides the pathological side of the

question, the anatomical feature. At the meeting in Washington one of the members said tracheotomy sometimes is a formidable operation, and in this it was a very formidable operation because of the position of the trachea. The position of the trachea was an unforeseen difficulty, which one would not think of had he not seen a similar case.

THE RECIPROCAL RELATIONS BETWEEN CONSUMPTIVES AND SOCIETY.

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No medical or economic problem at the present time can assume such a degree of importance on account of its almost universal application, and the degree of individual and state responsibility involved, as the prevention of pulmonary tuberculosis. This disease is known to affect approximately one-third of our population, and to constitute one-seventh of our annual deaths. Several millions of people in this country are now afflicted with a tubercular process, known to be communicable rather than hereditary. Practically, its transmission occurs, not so much from infected food-supply as from the existence of an almost ubiquitous agent disseminated by means of the sputa of infected individuals.

That the disease is thus communicable should not be understood to be so much the result of direct infection from one person to another, after the manner of certain contagious diseases, but more because of the neglect to observe necessary precautions. There is thus permitted a wider distribution of the bacilli, whose continued presence in the home and in public places constitutes a source of danger to those rendered susceptible by occupation, manner of life, previous disease, inheritance and environment. Only to those especially predisposed is the disease communicable, and even to these, scarcely ever from a single exposure. Not only is the infection incremental in character, but rarely is the first infecting process known to exist after it is once acquired. More frequently is it the repeated infection which the individual resistance is finally unable to overcome without the recognized manifestations of the disease.

Despite these established truths, together with an actual diminution of the mortality-rate in recent years, wherever reliable statistics have been obtained, the fact remains that the welfare of the commonwealth is seriously threatened. The dark shadow of consumption still hovers over countless homes. There exists a foe in our very midst more dangerous than an invading host, and for whose complete subjection and the consequent safety of the people, there is required only a small fractional part of the energy and means that are expended in prosecuting a war of conquest, or in an imaginary effort to uphold national honor. To one whose sympathetic attention with reference to tuberculosis is constantly forced to the contemplation of the direful results of apathetic indifference and ignorance from some sources, and an immoderate professional attitude, with popular intolerance from others, there certainly remains much to be desired toward the practical solution of the tuberculosis problem.

Consumption is now recognized to be a distinctly preventable and largely curable disease, and hence should be prevented and cured when possible. Does there not exist, therefore, an imperative obligation upon the state to secure adequate protection for the com-

munity, and suitable provision for the care of those afflicted? This responsibility rests indirectly with the medical profession in its advisory capacity on matters pertaining to public health. The physician should be confronted with his obligation to consumptives no less than to society. Fortunately a wise and conservative regard for the needs of each class need inflict no hardship upon the other. Their interests are actually identical, and their relations should be reciprocal. That they are not so regarded at present is a reproach to the profession and should serve as an incentive to more active measures pertaining to the inspection and control of the disease, and to more duly considered methods of popular education. It is to be regretted that the advocacy of such extreme procedures as the isolation and segregation of consumptives, the placarding of houses, the necessary cremation of the dead, the enactment of laws governing marriage, and similar considerations have served only to inspire exaggerated feelings of alarm. It has been my observation that the public generally entertains no just conception of the manner in which the infection may be conveyed, and hence no appreciation of the comparatively slight danger of contagion under ordinary precautions. In like manner, it is quite unusual to meet consumptives who have received any competent instructions pertaining to the protection of the community. An unreasoning fear with a general prejudice on the one hand, is opposed on the other by a certain disregard for the rights of society, together with a natural resentment due to the humiliation imposed, and lack of moral support. It is apparent that the safety of the public must be exalted above the pride and sensitiveness of individuals, even though they constitute a large portion of the population. It is equally true that the burden of the consumptive should not be made harder to bear, and his chances to recover from a curable disease made less by reason of erroneous popular impressions and an inflamed public sentiment. Each class has its inviolable rights, and they should be made incontestable. It is incumbent upon the medical profession to recognize the claims each has upon the other, and in the capacity of arbiter to adjust apparent differences without injustice to either, and with broad sympathy for both.

What claims can be presented by each, and what measures can be instituted to satisfy them?

If pulmonary tuberculosis is preventable, the consumptive has a claim upon society by virtue of the very fact that he has become an innocent victim of the disease. He has been permitted to suffer a continued exposure to infection after having been subjected to such conditions of ventilation and hygiene as to bring about an increased susceptibility. Both the exposure and the lessened resistance have been to a great extent preventable. Who has jurisdiction to prevent, if not society? And if so, why is not the state morally responsible for its failure to do so?

It must be admitted that the consumptives of to-day, previous to the inception of the disease, had not been warned sufficiently of the practical dangers of infection, and instructed concerning intelligent measures of prophylaxis.

While this obligation on the part of society is now being fulfilled to some extent, it can not be said to apply to the great majority of those already afflicted.

Another claim of the consumptive upon society, and one reflecting directly upon the medical profession, is the distressing delay in securing accurate diagnosis.

It is only with reference to early cases that consumption can be said to be a curable disease in the sense of its permanent arrest. Mistaken or delayed diagnosis at this time almost invariably associated with results of a most disastrous nature. The failure on the part of the medical profession to adequately appreciate the significance of rational symptoms, to recognize and interpret accurately the physical signs, has occasioned an annual sacrifice of thousands of human lives. The responsibility is more apparent when it is understood that too frequently the available data have been amply sufficient to warrant an early provisional diagnosis.

Referring to my observations previously published¹ on a series of 546 selected cases in private work, it is stated "that 388, or 71 per cent., arrive in Colorado with distinct evidence of tubercular infection in each lung." With reference to the duration of the disease before arrival, the total average period of delay from the time of definite onset of the disease, was a little over eighteen months, affording abundant opportunity for advanced pulmonary and constitutional impairment. "Is not the character of the cases sent to Colorado a striking commentary on the necessity of a more thorough appreciation of the principles capable of every-day application upon which to base early diagnosis?"

Has not the unfortunate victim of such delayed diagnosis a just claim upon the profession, and through it upon society, which in many states places no restrictions upon and enforces no qualifications for medical practice?

Another consideration to which the consumptive is entitled, is that of humanity. The pulmonary invalid is a human being and is not subjected to the same ultra-scientific principles that would be accorded the lower animals. He is above all entitled at the hands of the state to every energetic provision that may save or prolong life, and to every sympathetic attention that may help to alleviate suffering. Especially is this true of those who have not the means to subsist without work, independently of their more fortunate but often no more worthy fellows.

If the state is called on to provide institutions for her non-consumptive poor, who are frequently reduced to poverty through their own responsibility, and who are never to resume their functions as citizens, but are destined to forever remain as a burden to society, how much more should the state be obligated to provide similar institutions for those who have suffered, usually through no individual liability, who represent an entirely different class of citizenship, and who in many instances, with such a provision, can resume their duties and former positions in the community.

This claim of the consumptive poor is re-enforced by the added protection to accrue to society itself, through the control thus offered of those unable in their ordinary environment to observe sanitary precautions.

What are the claims of society with reference to the consumptive?

Inasmuch as the invalid, in the absence of certain precautions incident to his daily life, is a direct source of contagion, and therefore a menace to his family and the public, and whereas, a strict conformity to prescribed instructions actually prevents him from becoming an element of danger, it becomes incontrovertible that society has the right to expect and demand of the consumptive the most rigid observance of sanitary rules, the most hearty co-operation and willing sub-

1. Medical News, Sept. 30, 1899.

mission in the way of conservative municipal control. Popular prejudice and drastic legislative measures may inflict added burdens upon the consumptive, but the one purpose to be attained, public protection, will have failed of accomplishment if there is not secured his individual desire to faithfully perform his part. It is the invalid himself to whom our efforts must be addressed, and these in the form of instructive and persuasive appeals. With the acknowledgment of its own obligations, society justly will receive a recognition of its claim upon the consumptive. Through an active educational propaganda, these claims will meet with a ready response, the exception being only with those who are very ignorant or vicious, and for whom special detention institutions may be erected for the public weal.

As to the various means that may be employed to satisfy the joint claims of consumptives and society, it is primarily essential that there should be a uniformity of method in the several parts of the country. A concerted plan of action under national authority would be most effective.

A distinct bureau of public health, elaborating upon the excellent work now done by the Marine-Hospital Corps, having an advisory jurisdiction over state and county societies, and exercising immediate authority over all officers of public health, would do much along the lines of preventive medicine, if such could be made practicable without infringement upon the rights of states, and without the taint of national politics. It is to be feared that in some instances personal political ambition has biased the health authorities to an undue enthusiasm in the administration of public office. For such responsible positions men should not be selected as a result of political preferment, but should be chosen by their fellows on account of their peculiar adaptability to faithfully execute such labors, for which greater compensation should be rendered, commensurate with the arduous responsibilities involved.

The campaign of education and municipal control should include at once the compulsory notification and registration of all cases of pulmonary tuberculosis. This does not imply placarding of houses or apartments, isolation, or other personal humiliation, but furnishes an opportunity for more thorough inspection and supervision. Interference with social aspects and business pursuits is uncalled for. Quarantine and segregation are altogether impracticable. The family ties of several millions of people are not easily disrupted. Segregation is alone feasible and desirable in the case of the consumptive poor. It should be made clear that notification and registration does not carry with it the contemplation of interference with personal rights, unless rendered necessary by the repeated and intentional infractions of prescribed regulations. Notification should be made obligatory upon patient, physician and householder, and failure to comply should be punishable by fine. Periodical disinfection of apartments should be made under the supervision of the health departments, and always done following the death of the patient. It should be no hardship for the consumptive to be in a position to receive competent instruction from some responsible source, either directly or through the attending physician. By this means, added protection is accorded to himself and family as well as to the community.

The methods of instruction directed to the consumptive with his family, and to the general public should be to impart an appreciation of his obligations

to society, and to secure his active, unremitting cooperation. He should be supplied with carefully prepared circular information explaining the dangers of infection and re-infection, describing in detail all necessary preventive measures, with an emphatic demand for their observance. It is of vital importance that all official information afforded the general public through any channel whatever should be essentially of a reassuring nature, although not minimizing the possible dangers resulting from the presence of the careless consumptive. Through the medium of public documents for general free distribution, the newspapers and public addresses, the public should be informed concerning the comparatively few methods of possible infection. It should be made clear that the infection can be thus conveyed only through gross violation of the simplest precautionary measures, and that a due regard for such sanitary rules afford protection from direct infection despite intimate and protracted association. It should be explained that the infection is exceedingly slow and rarely results from a single exposure. It should be emphasized that unless the soil is rendered receptive to the bacillus by lessened individual resistance, infection is unlikely, despite more or less exposure. Apropos of this, attention should be called to the necessity of greater individual care concerning mode of life, occupation and environment. The hygiene of the home should be discussed at some length, with especial reference to ventilation and sunlight.

In addition to these more direct methods of instruction through the medium of the profession, there should also be instituted a degree of governmental or municipal supervision of the construction of public buildings, tenement houses, factories, commercial establishments and conveyances. Ordinances should be enacted and enforced prohibiting expectoration on the sidewalks, crossings, or in any public place where people walk. Offenders should be punished for repeated violation of this. The objection to the occasional expectoration upon the street or in the gutter, disgusting though it be, does not appear of great practical significance, as far as actual danger is concerned, in view of the more direct exposure to sunlight, the frequent sprinkling and the fact of the bacilli not being kept in circulation and carried to the home by the sweeping skirt.

The spectacle of the use of the expectoration flask is revolting and hardly necessary. Small napkins of cheese-cloth held over the mouth in the act of coughing, to serve as a receptacle for sputum, and subsequently deposited in bags made of oil-silk, oil-muslin, or rubber, capable of disinfection, are infinitely more satisfactory from every standpoint.

Of surpassing importance is the matter of sanatorium provision for the various classes in appropriate climates. I can but take vigorous issue with those who fain would regard the influence of climate upon pulmonary tuberculosis as a "fetish of the past," now replaced by sanatorium régime. It is a matter of record that the satisfactory results obtained in the few institutions of this kind, without the most favorable climatic attributes, is largely due to the fact that only incipient cases are admitted. Disclaiming any desire to detract from the intrinsic worth of such institutions, I am forced nevertheless to make the query, "Have we evidence to substantiate the claim that the improvement in each case has been invariably due to the sanatorium itself?" Would not the same régime observed outside the institution have been attended with results almost, if not quite, as good? It is well known that a consid-

erable number of incipient cases get well in the less favorable climates even despite unfortunate conditions and environment, in the absence of rational measures, and often without the knowledge of the tubercular character of the affection.

It has been my experience in Colorado to observe patients presenting a history such as would be applicable to these cases, and showing after the lapse of several years, a record of a fresh infection. Upon arrival, in addition to the recent tubercular process, evidence is occasionally found, upon physical examination, to justify the theory of a previous infection, subsequently arrested.

I feel warranted, therefore, in asking if the heralded results of sanatorium treatment in unfavorable climates in incipient cases are not due in some measure to the simple relief from work, changed surroundings and detailed instructions, at least a portion of which could have been secured in many cases by the same competent medical adviser outside his institution. I have chanced to meet several such sanatorium cases that have experienced a return of their trouble, and have sought climatic improvement as more advanced cases after a disastrous period of delay. I am impressed that the sanatorium life for consumptives is of value largely by virtue of the enforced regimen, which appears to be practicable without the aid of the institution, especially among the better classes. There can be no question, however, of the improved facilities for the management of the consumptive poor, and even those less embarrassed financially, in properly conducted sanatoria in any climate. This, however, should not be construed as constituting an argument against the greatly increased benefits to be derived from appropriate climatic influences. While local sanatorium accommodation should be made for the consumptive poor in every state, I would strongly advocate the construction of special institutions in various regions applicable to the several stages and complications of the disease. Such sanatoria should be adapted to the special needs of the particular class for which they are erected, opportunity for outdoor employment being offered in some to those whose physical condition will permit, as a means of defraying expense. A number of these institutions could be under the control of one or several states jointly, some under federal supervision, and still others directed and maintained by the several benevolent orders and societies. It is for those in more or less financial distress that sanatoria are specially demanded. There is at present no provision for the enormous class of consumptive poor, who, unable to work, and rejected in turn by all the charitable hospitals, appeal despairingly for relief. For these there is now no alternative but death.

In these times of unexampled prosperity, have not our impoverished consumptives, with this preventable and curable disease, a claim upon society that can no longer be ignored. It is not a time for pedantic assertions concerning marriage laws for the pulmonary invalid, the undesirability of tuberculous offspring and the care of the consumptive dead, etc., but a practical application for the benefit of the living of those humanitarian instincts ever ready to respond to the call for help. A determined public effort toward the arrest and amelioration of the disease in those unable to help themselves would also be attended by prophylactic results of a most satisfactory nature.

THE PRESENT secretary of the navy of Portugal, Dr. Tiexura de Souza, is a physician.

THE SERUMS IN TUBERCULOSIS.*

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TOXINS IN THE TREATMENT OF TUBERCULOSIS.

The remedial use of these poisons has practically been abandoned. Inaugurated by Koch, who saw good results in the use of tuberculin in certain cases of lupus, his incomplete investigations were pushed into publicity prematurely by over-sanguine officialism in Germany, and great was the general disappointment and the damage to Koch's well-earned reputation when our hopes vanished.

Later, Klebs preconized another form of tuberculin called "antithesine." Much was claimed for this so-called modified form of Koch's original tuberculin, and it was used for a while as a remedy for tuberculosis. It did not add luster to the already high reputation of this scientist, and to-day it is not in general use.

Then came Dr. Von Ruck's antithesin. Von Ruck has for a few years published great promises about this agent, which he has named "watery extract" of the products of the bacillus of tuberculosis, and of which different varieties are offered. It is urged that this preparation is free from certain poisonous elements existing in other tuberculins, by virtue of which, irritation and fever are produced.

These toxins are each one form or another of tuberculin, the poisonous products of the germs and their culture, and all are modifications of Koch's original agent, repudiated by himself and his followers as a therapeutic measure. Finally, in the last three or four years, Koch recommended still another tuberculin which he termed "tuberculin residuum," T. R. for abbreviation. It consisted of a product including the natural poisonous liquid of a broth culture of the germ of tuberculosis and the toxins of the structure of these parasites, extracted by a process of pulverization, mashing (?), centrifugalization, filtering, etc. The revived hopes it created by the magic of Koch's name passed into oblivion within a few months of the first report.

Such are the toxins of the tubercle bacillus of which we have records as medicinal treatments for the "white plague." Only one remains in evidence, namely, Von Ruck's watery extract, for which he and some of his followers have established seemingly reliable, but in fact dangerously misleading, records, for their chief reports were made at the health resorts of North Carolina and Colorado, where equally good results have been obtained by numerous physicians by good management and climate alone.

The merit of all these products, if indeed they have any, which I do not deny to a certain degree and under proper circumstances, depends wholly on the poisons which they contain. If all the poisons are abstracted or neutralized, the product becomes bland. It becomes as water. If only certain kinds of poisons are abstracted it becomes modified in its toxic properties to that extent; and to that extent also it is depreciated in the power to produce reaction. Now, the toxin of an infectious disease is utilizable as a therapeutic measure only to the degree that it may, by reaction of the system, produce a measure of immunity more or less complete. That means vaccination. Vaccination is not a curative, but a preventive measure, and consequently should be applied before the existence

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