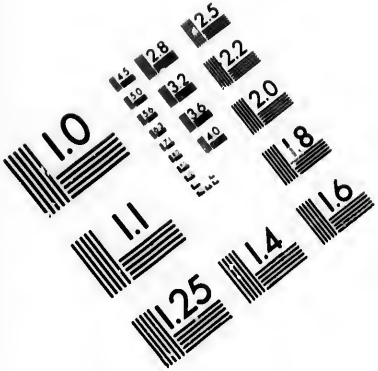

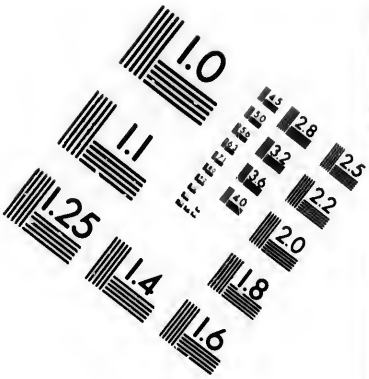

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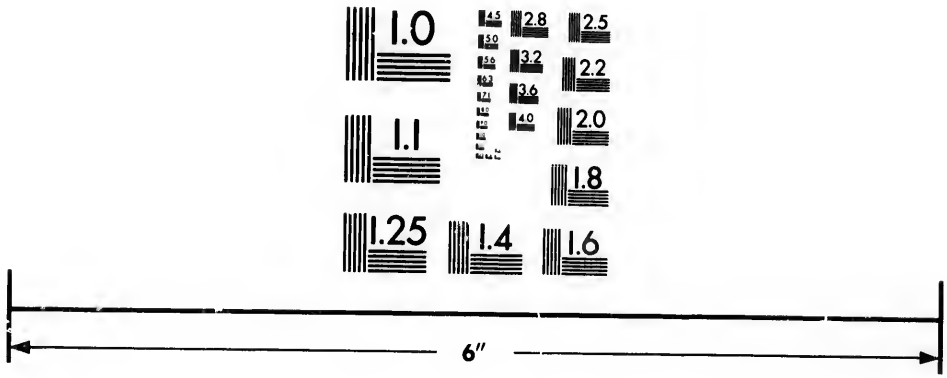

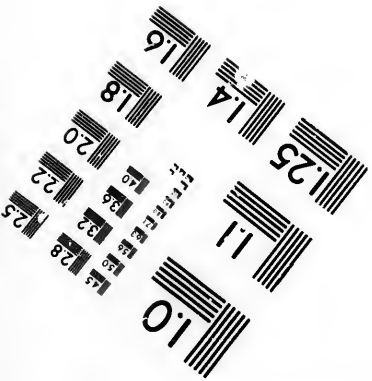

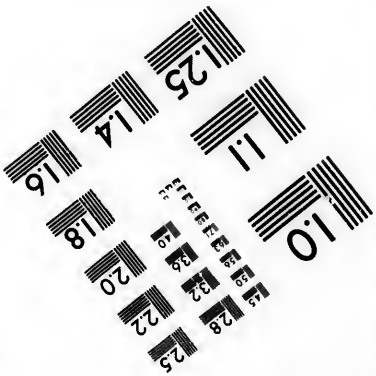

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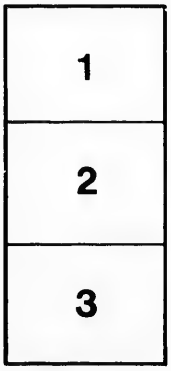

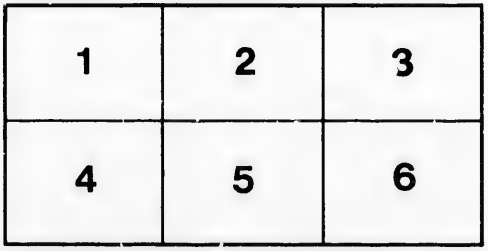

C

THE USE OF ALCOHOL

—IN—

PNEUMONIA

—BY—

L. COYTEUX PREVOST, M. D. V.

PHYSICIAN TO THE GENERAL HOSPITAL, OTTAWA.

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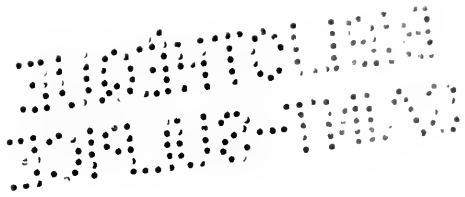

ON

THE USE OF ALCOHOL

IN PNEUMONIA.

Mr. President and Gentlemen.

Among the diseases that afflict poor humanity, inflammation of the lungs may be considered, without contradiction, one of the most important, as much with regard to its frequency as to the dangers of the lesions and the gravity of its symptoms.

The sudden and solemn onset of this affection, the cyclic course of the fever which accompanies it, the stitch in the side, the dyspnea, the cough, the expectoration, the signs revealed by the stethoscope, the anatomo-pathological particulars, every thing, in short, indicates such an activity in the process, that it is no wonder that this disease, more than any other, has solicited the active and often meddlesome interference of the physician.

It is not my intention to review all the modes of treatment of this disease: such a vast subject would not permit my keeping within the bounds I have traced for myself, wanting merely to offer you a few considerations, supported by personal observations, on a mode of treatment, which, although it has been recommended for several years, may be considered still in its infancy: I mean the treatment of acute inflammation of the lungs by alcohol.

In constituting myself the defender of this method, I feel that I may perhaps shock the preconceived ideas of some among you, but while asking before hand your pardon, I must sincerely confess that such is, to a certain extent, my object, because it is often by the clashing of different opinions that we arrive at the truth.

The subject is exceedingly important and merits all our attention.

It is to be deplored, that, in therapeutics, we are generally so apathetic. Incessantly following beaten paths, and allowing

ourselves to be led on by superannuated theories, we are too apt to cast aside as worthless, facts which have no other claim to our contempt than that they are the expression of new theories.

I admire and certainly profess profound respect for the intellectual conceptions of the immortal Broussais whose doctrins have been so favorable to the use of the lancet.

I reverence also the name of Rasori who entertained, for emetics, an affection shared by so many thousands physicians. Honor be to those men of genius! But I refuse to constitute myself as their slave, and what I wish before all, is to save the life confided to me: such is the true mission of the physician and it matters but little what doctrin I adopt as long as I attain my object.

The applyance of alcohol to the cure of diseases, traces its origin to a very remote time in the history of medicine.

In the thirteenth century, alcohol was considered as a universal panacea and known under the name of "*aqua vitæ.*" They attributed to it, the property of exciting the nervous system and prolonging existence.

In 1662, Bruno Cibaldi wrote a complete treatise upon the method of curing all diseases by the sole use of alcohol.

The observations on pulmonary affections cured by spirits, have long occupied place in medicine. Hazard had given those agents as a useful remedy, practice confirmed their efficacy and theory afterwards came to explain their mode of action and served us as a control to these empiric notions.

In 1690, Scheldamer relates the cure by the eau-de-vie of a pneumonia which existed epidemically.

At the beginning of this century, owing to the almost universal domination of Broussais' antiphlogistic method who laid down as a principle that "irritants are the only morbific causes" the use of alcohol and various spirituous liquors was abandoned.

To Laennec is due the honor of having first reacted against these too exclusive tendencies and recommended the use of this agent in the acute thoracic affections.

Chomel, eminent clinical authority, whose name is still in France, surrounded by a glorious halo, Chomel also powerfully struggled against the tendencies of the teachings of the "Val-de-Grâce" and extolled the use of wine in adynamic forms of acute diseases.

But it was an english physician, Robert Bentley Todd, who, relying before all on facts, established in method the use of alcohol and the preparations which are derived from it, in the treatment of pulmonary phlegmasias. He clung to this idea and succeeded so well to attract upon it the attention of learned men that, to day, in clinic, Todd's medication is synonymous of medication by alcohol.

Béhier, physician at the Hotel-Dieu, had the merit of introducing in France the therapeutic method of the learned english physician, and after a judicious examination of facts, he came to the conclusion that alcoholic preparations, methodically employed, are of a use, a great deal less dangerous, easier and less injurious than we are generally inclined to admit; that they are a precious means of raising and consolidating the strenght of the economy, and, in short, that we can employ them in larger doses than we ordinary do, provided these doses remain fractional.

The pupils of Béhier, in France and those of Todd in England, continued the study of treatment by alcohol.

Anstie, Murchison, Lyons, Marvaud, are the authors who more especially applied themselves to it.

This medication is a real therapeutic revolution and to show how in a short space opinions may changed, I beg to recall that, alcohol as well as the other exciting medicaments, were considered by modern therapeutists, as liable to determine that combination of circumstances that we agree to call "ephemeral inflammatory fever" and which is caracterized by an increase of energy in the impulsion of the heart, the frequency of the beatings and by the augmentation of the heat of the skin.

It is, to day, a general notion in medical practice, that this medicament, which formerly was considered as incendiary, diminishes fever, and that it is especially in feverish individuals it produces the greatest lowering of temperature.

It is certainly on subjects affected with pneumonia, that the medication by alcohol has been the most widely experimented, and the facts recorded by Todd and Béhier are very numerous.

At all times, alcoholics have been administered in acute diseases, where there existed a great depression of strength: but no person before Todd had thought of systematizing the medication. A profound study of physiological properties of alcohol in medicinal doses, added to new ideas on the essence of acute diseases in general and pneumonia in particular, such were the causes which led to bannish from the treatment of inflammation of the lungs all kind of depressing modes of treatment, such as bleeding, emetics, to replace it by a stimulating and reparating one.

But before going any further, permit me to lay before you a short sketch of the acquirements that modern science has given us, with regard to the physiological properties of alcohol in medicinal doses.

According to Todd, alcohol is an aliment. This opinion, shared by Liebig and contended with by MM. Lallemand, Perrin and Duroy, was victoriously supported by the so scientific researches of Dupré, in "Proceedings of Royal Society 1872," and Anstie in "Practitioner 1874."

These new researches establish the fact that alcohol completely consumes itself, that we cannot refind it in perspiration and in very small quantity in the blood, the expired gases, and the urine, on condition that the doses had been small and divided.

Liebig considers it as a respiratory aliment, and according to Albertoni and Lusana, a certain quantity incorporates itself in the tissues and contributes to the formation of fat and some other substances of organism.

Alcohol, always administered in moderate doses, is a stimulant of circulation and produces a greater amplitude of pulsations and also the diminution of vascular tension by an action that Anstie attributes to the intermediate of the vaso-motors.

It is also a stimulant of nervous system, which is plainly shown by the experiments of Cl: Bernard. It acts upon the intellectual, motive and sensitive functions. This action is attributed by Orfila, Brodie and Marcet to a reflex action on the brain due to an excitation of the terminations of the pneumogastric by alcohol, in the stomach.

In our country, where, during six long months, we are exposed to the low temperature of winter, it is commonly acknowledged that a good glass of whiskey or Brandy warms one up. Is it through imagination or confidence that we experience this agreable sensation of warmth? I do not know, but what I am aware of, is that the experimental results are entirely opposed to this conclusion.

MM. Dumeril and Dumarquay (Paris 1848) by experiments made on animals, Sidney Ringer and W. Richards (Lancet 1866) by experiments made on healthy as well as on feverish subjects, E. Smith (Lancet 1861) Maurice Perrin, Marvaud, Magnan, (Paris 1871) and lately several other authors verified the fact: all are unanimous on this point that alcohol lowers temperature.

Gentlemen, I have just laid before you a brief outline of the physiological properties of alcohol on healthy subjects, but I must not pass silently the action of this medicament on feverish individuals. Here, you may perhaps accuse me to emit statements of a paradoxical nature in attributing contradictory properties to the same agent. To this, I answer that I am partisan of no theory and that I bow to facts the evidence of which renders them indisputable.

Alcohol reduces febrile heat a great deal more than it does normal heat. This is the result of the observations made by Todd, Béhier and Binz.

On the other hand, alcohol tends to raise the temperature when it falls below normal.

Whatever theory we may adopt to explain animal heat, it is certain that the latter regulates itself constantly in persons affected with fever as well as in healthy individuals; the only

difference is that in healthy subjects, regulation will take place about 98 degrees Farenheit, whereas on a feverish one, it will be about 102 or 104, the same way as in uremia it will occur at about 96.

Without trying to ascertain the seat of this regulating power or to localize it in a small spot of the bulb, or to show that it is shared by the generalty of the various parts of the central nervous system, we can establish its existence and pronounce the following general law: "Alcohol given in medicinal doses maintains to its physiological rate the regulating power of animal heat or tends to restore it to its normal state, when it deviates from it."

In other terms, alcohol tends to reduce the temperature when it is increased, it tends to increase it when it is diminished and neither does it increase or reduce it when it is normal.

The action of alcohol on the respiration and circulation of subjects affected with fever is not less interesting. In this case also, it acts as a regulator; if the heart beats too fast, alcohol makes it slower and if too slow, quickens it; In fact, it is a heart tonic.

The functions of the brain seem to be submitted to the same law; alcohol having a tendency to bring them back to the normal level from which they have departed, calms delirium et dissipates tupor.

Gentlemen, what I have stated is by no means arbitrary and is supported by clinical and experimental facts recorded in works of indisputable authority. Theories naturally abounded to explain these interesting phenomena. I regret that time and space do not allow me to devote a few moments to the study of those hypothesis, I would yield perhaps then to the desire I experience to apprize you of the admiration I feel for the doctrin of the fine old Brown who proclaiméd "*asthenia*" the prime cause of the morbid processes of the economy.

Is this doctrin of times that are gone by, true in its essence, or, is it but the expression of a truth applying itself to certain medical constitutions, and particularly the one we are presently traversing?

Be it as it may, I cannot help declaring that the general impression that has been made upon me by the few years I have spent at the bedside of patients, is that we find ourselves a great deal oftener obliged to add rather than to take away in the indications offered to us by the diseases, temperaments and constitutions we have to deal with.

But I do not want to abuse of your kindness and I hasten to pass on to the few considerations I wish to lay before you, with regard to the nature of Pneumonia.

Pneumonia is an acute inflammatory disease, which, like all other inflammations, must absolutely go through all its stages, without being checked by any treatment whatever.

There is a very important practical consequence that directly proceeds from the study of anatomical evolution of the inflammatory process, namely: "When the living tissue has answered the irritative provocation which it has undergone, that is to say, when inflammation is definitely established, resolution is the quickest termination that can be obtained; but, however rapid this ending may be, it cannot take place before the phase of nutritive irritation has accomplished its natural evolution," (Jaccoud.) Now the progress of histology and the admirable works of Wichow and his pupils, show that this evolution includes several operations, such as vascular exosmosis, formation of exsudation, which require necessarily a certain time, and teach us besides with luminous évidence, that inflammation cannot be checked in its course, that therefore, there are no modes of treatment that can cut short the local hypernutrition and that resolution is before all a matter of time.

Pneumonia, as an inflammation, is submitted to the same law

Here are, moreover, the conclusion that Todd has come to, in therapeutics, and which Professor Béhier has resumed in "Dictionnaire Encyclopédique" as follows:

1st. The idea so long prevailing in schools, that an acute disease could be prevented or cured by means which depress and reduce vital and nervous strength is altogether fallacious.

2nd. An acute disease cannot be cured by the direct influence of any mode of treatment or any known therapeutical agent.

3rd. The disease gets cured by a natural evolution, for the complete developement of which the vital power must be sustained. Remedies, either as medicaments producing a special physiological action in the system, or otherwise, are useful in as much as they can excite, assist or provoke this natural curative evolution.

Clinical observation, besides, is in perfect harmony with the above pathological statements. The studies of Wunderlich confirmed by those of many other authorities, teach us that the course of temperature in pneumonia is invariably the same, of a regularity similar to that of all essential fever and therefore under...es the influence of no medication whatever. For the first 24 or 48 hours, the thermometer indicates from 102 to 104 degrees. This elevation of temperature persits, with few morning remissions, until the fifth, seventh or ninth day, when a sudden defervescence termed "crisis," takes place and brings back the temperature to its normal state ending the febrile cycle. The disease then enters the phase of reparation which is complete after five or six days, the whole duration of

the disease being from 14 to 15 days in cases free from complications.

This course of the temperature is the external manifestation of the pathological process evolving in the midst of the inflammed tissue of the lung. The ascension of temperature corresponds to the period of exsudation, the stasis to its coagulation, the decline to its liquefaction and the yielding of all the symptoms.

I repeat it, gentlemen, this cyclic course of pneumonia, is invariable, and the natural evolution of the lesion can neither be shortened by venesection, calomel, emetics, nor any other means or modes of treatment.

This course, this regular evolution of pneumonia was unknown to our forefathers armed with the lancet and deprived of the thermometer.

It is to the school of expectation that we owe this knowledge, it is expectation that demonstrated that pneumonia behaves itself according to the regular cycle above mentioned, even abandoned to itself, outside of all therapeutic action, running its course with the same precision as an eruptive or a typhoid fever.

I shall, in the same time, avail myself of this occasion to protest against the erroneous ideas of certain physicians who refuse to acknowledge the utility of thermometer, in clinics, and who consider this precious instrument as a mere object of luxury, by no means superior to their "*tactus eruditus.*" Is it the abhorrence of innovation, or the ignorance in which they are of the progress realised by this new application of physical means to diagnosis and prognosis, that makes them treat it with such a contempt? I do not know, but it does not detract from known science that, although we must avoid granting exaggerated utility to this instrument, we must consider thermometer as a safe and necessary guide in the greatest number of diseases the physician has to treat.

I beg your pardon, gentlemen, for the digression and hasten to return to the discussion of my subject.

Pneumonia has not been considered by all the authors, as a merely local affection, similar to other phlegmasias, producing like the latter, general symptoms, consequences of the primitive organic trouble.

According to Huxham, Borsieri, Todd, Hoffman, pneumonia is a disease essentially general at the first onset, having its local expression in the lungs. According to them "*Febris peripneumonica,*" is but the expression of a morbid principle, diffused in the organism, producing the inflammation of the lungs as the rheumatic fever produces arthritis and ague the enlargement of the spleen and the liver. Such is also the opinion supported at all times by the school of Montpellier.

Of late, an undisguised return took place towards this former conception of "*Febris peripneumonica.*" Jurgensen, Friedrick, Conhein, Klebs in Germany; Marrotte, Parrot, Bernhein in France; Hardwich in England, constituted themselves the defenders of these renewed ideas.

According to Bernhein, pneumonia means also a pneumonic fever: "By the way it begins, he says, pneumonia often behaves itself like a pyrexia, a fever. That regular cyclic course of temperature, such as you will find it in pyrexias, eruptive fevers, erysipelas; that rapid crisis in a fixed day, the amendment of the general state invariably preceding the resolution of the local, the history of the disease almost figured by the graphic curve of the fever, does not all that give the impression of a general disease localized in the lung, of a pneumonic fever and no a pneumonia?"

Klebs goes further still and describes a protorganism the "*monas pulmonalis,*" the inoculation of which in animals would artificially bring on the disease.

Hardwich of Sheffield relates several observations of pneumonia, transmitted by contagion: "A priest is affected with pneumonia, one of his relatives calls upon him and takes the same disease and a third person gets it through the latter. In an other locality, an old man stricken by pneumonia summons to him several friends and every one of them are soon after affiicted with the same disease. Lastly, in a third series of facts, we see, after the apparition of a case of adynamic pneumonia in a village where this disease was not previously prevalent, six similar cases showing themselves in subjects who had been in relation with the subject at first affected or with each other.

Jurgensen, denying the contagiousness of pneumonia, says it belongs to the class of infectious diseases. He says that pneumonia is no longer an affection which developes itself in the same condition as the *phlegmasias a frigore*, but rather under the influence of causes similar to those which engender typhoid fever, such as overcrowding and certain telluric conditions. Anatomically, pneumonia differs with all other pulmonary phlegmasias, and just as it is impossible, by an irritant whatever, to provoke in the intestines the characteristic lesion of Peyer's patches of typhoid fever, so also we would try in vain to produce experimentally the lesions of acute pneumonia.

Clinically, he says, pneumonia has a typical course, a cyclic evolution, which no other local phlegmasia presents in the same degree. Infectious diseases alone, such as fevers, offer such a regular type. In short, the following, are the conclusions which this author arrived at:

"Croupous pneumonia is a constitutional disease, and is not "dependant upon a local cause. The pulmonary inflammation "is merely the chief symptom, and the morbid phenomena

" are not due to the local affection. The hypothesis of a " morbific cause is indispensable. Croupous pneumonia belongs " to the group of infectious diseases..... .....It cannot be " produced by any of the usual causes of inflammation, however " strong or weak their action ; as in typhoid fever, there must " be a special exciting cause. Croupous pneumonia is a disease " which runs a typical course. No affection which arises from " a local lesion presents a career so definitely limited in point " of time as is the case with " croupous pneumonia."

If then, instead of considering Pneumonia as a mere acute inflammation submitted to the rules laid down by Todd and Béhier, we sooner accept the opinion of those who believe in the essentialty of this affection considered as a fever, we must admit our inability to stop the course of this disease, just as much as by any known therapeutical agent whatever we can break or directly cure a scarlatina, a measles or a typhoid fever.

Therefore, Gentlemen, since we have to deal with a disease which, whatever we may do, cannot be checked in its course and must absolutely go through all its stages ; since this affection posesses a depressive action on the economy and tends to put in danger its victim, on account of the length of its evolution ; let us not loose our time trying to cut it short by a depressing treatment, but, on the contrary, let us endeavour to put the patient in a condition that will enable him to await and assist the normal completion of the pathological working ; let us stimulate and strengthen the organism which has a tendency to faint, in order that it may advantageously struggle with the disease . let us try, as much as possible, to bring back the temperature and circulation towards their respective normal standard. All these indications are, as nearly as possible, fulfilled by alcohol owing to its properties upon which I already dwelt.

Now that we have examined the theoretical side of the question, let us see, if you please, Gentlemen, the practical results already obtained by the treatment of pneumonia by alcohol. Allow me, at first, to cite the statistics that I gathered from Dujardin—Beaumetz himself in Paris, in the various modes of treatment used in acute inflammation of the lungs :

The cases treated by bleeding gave a mortality of 27 per cent.

By Emetics..... .....21 per cent.
By Expectation.....7 "
By alcohol.....3 "

At the Edinburgh Royal Iufirmary, from 1839 to 1848, out of 648 patients treated by venesection, mortality has been of 34 per cent.

Rasori, by venesection and tartar emetic had a mortality of 22 per cent.

Bennett, of 129 cases submitted to the alcoholic treatment and tonics, lost only four patients, being a mortality of only 3 per cent.

Grisolle himself, in spite of his evident antipathy to the use of alcohol is compelled to state in some of the pages of his treatise, the good effects of that medication. " Forty-five patients, he says, drank hot sugared wine,, the greater part of them drank it during 7, 8, 9 and 10 days, successively, the quantity varying between 8 and 60 ounces. Of these 45 patients, five only died, that is a mortality of 11 per cent.

Flint declares himself entirely in favour of alcohol and uses wine, brandy, whiskey, giving in average one ounce of Brandy every two hours to his patients.

In 1871, Peter, physician at l'Hôpital de la Pitié, in Paris, of 18 patients affected with pneumonia had only one death. Of these 18 pneumonias, two were bilateral and seven affected the apex of the lung.

About the same time, Danet, of 60 cases that he had under his care, treated 20 of them by venesection and blisters and had 16 deaths ; 20 were treated by digitalis and blisters, 12 died ; the 20 others were submitted to alcohol, and four only died.

Out of 36 cases treated by alcohol, Béhier obtained 29 cures in the Hospital. Among these 29 cases, the grave ataxo-adynamic forms were observed 11 times and on others, all the signs of the mere inflammatory form ; it was in non-alcoholic subjects from 20 to 30 years of age.

If you permit me now, Gentlemen, to join to those statistics the humble result of my own experience, I shall say, that, within the last five years I had to treat 26 cases of pneumonia divided as follows :

On children from 6 to 15 years of age : 8 cases
On adults of both sexes : 17 cases.
On an old woman : 1 case.

Of these 26 patients, three died. But I hasten to say that on one, death occurred almost suddenly, during convalescence and must have been due to a lesion extraneous to the inflammation of the lung. Another one, the old woman, died most likely, from the results of an accidental poisonning by morphine.

The mixture I used in the treatment of those cases, is nearly the classical Todd's mixture, employed in France by Béhier and composed as follows :

R. Brandy from.....3 to 6 ounces.
Tr Cinnamon .....4 drachms.
Syrup aurantii ....1 ounce.
Aq : Purae .....6 ounces.

Sig : One tablespoonful every hour.

If the stitch in the side is the object of a special indication, I give laudanum internally or hypodermic injections of morphine.

In all cases I could observe the particular and interesting course of the temperature which I have above spoken of. Every one of them had almost the same duration. During the 7 or 8 first days, fever was intense and offered all the classical characters of inflammatory fever. About the seventh, eighth or ninth day, a sudden lowering of temperature would take place corresponding to the resolution of the disease evidenced by numerous rales, diminution of the blowing and greater facility of expectoration; convalescence was then established and about the 14th or the 15th day the patient could be considered as completely cured.

Several of the cases which ended favorably presented the most alarming symptoms, such as delirium, intense fever, &c., as you may judge yourselves by the following observations:

"Case 1st.—L. N....., Laborer, *aet.* 53.—Often exposed by his occupations to cold, dampness and misery. For a long time, he complains of rheumatic pains in the joints, especially at the approach of bad weather. Old chronic bronchitis accompanied with light cough and expectoration. At the latter end of April 76, he complained of uneasiness, loss of appetite and on the 29th in the morning was suddenly seized by a severe chill which lasted all the forenoon. To this chill succeeded very profuse perspiration with considerable delirium; the cough increased and towards the end of the afternoon the sputa appeared thick, tinged with blood and became in the course of the night as if completely composed of pure blood. Complete anorexia, emesis. Between six and seven o'clock he passes two involuntary stools in his bed. Intense headache, great thirst, very acute pain in the right mammary region.

I saw him on the 1st of May, that is, three days after the onset of the above symptoms. I noticed dorsal decubitus, restlessness, and incoherent mutterings; he is a prey to hallucinations. Quickened respiration, considerable dyspnea. Profuse diarrhœa. The pulse is strong, frequent, full and resisting. The pain exists in the right side between the 6th and 7th rib.

On percussion, at the left apex there seems to be a deficiency of pulmonary tone, the respiration there takes place by jerks. On the right, in the mammary region, dulness does not seem to be as considerable as might induce to suppose a strong blowing accompanied with bronchophony without any rales. Temperature is 39.8 centigrades, that is very near 104 Farenheit.

I prescribed, one drachm of Brandy in linseed tea every two hours.

May 2nd.—Deliriam all night, diarrhœa. Temp: 40, 5, P. 108. Viscous sputa intimately mixed with blood.

Better in the evening; delirium diminished; headache gone. Stitch always painful; physical signs the same.

Todd's mixture every hour, that is 3 ounces of Brandy within the 24 hours.

May 3rd.—Morning, T. 39.7. Pulse intermittent: 94. Spent a better night, delirium almost all gone; quieter. Yellowish stools, more consistent. Less blood in expectoration. Blowing still intense, filling the ear. Few rales perceptible after fits of coughing. White and coated tongue.

Evening, T. 39.5 P. 95.

May 4th.—The mixture has not been given last night, until this morning. He was restless all night. Pulse 100, intermittent, more delirium. Respiration 44. T. 39.5. Blowing seems to gain the posterior part of the lung. Stitch still painful, Blister. Todd's mixture containing 6 ounces of Brandy in the 24 hours.

May 5th.—P. 100 T. 38. Less delirium. Does not try any more to leave his bed, as he used to do. Blowing greatly diminished in front, but spreads towards the axilla and posterior part of the lung, no rales. Sputa continues red. Stitch not relieved by blister.

May 6th—Delirium persists. Pulse weak, intermittent: 94. T. 38.4 Pain in the side easier. Respiration 42. Sputa hardly contains any more blood. No more blowing in front; dulness and bronchophony in the axillary line. Behind, subcrepitant rales at both the inspiration and expiration.

8 o'clock P. M. Mutters all the time. Sputa again bloody. Cough looser. Pulse extremely irregular. Considerable weakness. Blowing diminished in the side. T. 39.4. Resp. 45.

Pres: 15 grains Bromide of Potassium, same treatment besides.

May 7th.—Good deal quieter. Slept now and then last night. Pulse: 80 weak and intermittent. T. 38.4. Numerous rales are heard all around the chest. R. 36. Nine o'clock P. M. T. 37.3 Moderate expectoration of white sputa.

May 8th.—P. 70, stronger, regular. T. 36.9 delirium completely gone. Slept well last night. Resp. 23. Wishes to eat.

May 9th.—Improving rapidly. Cough decreasing. Appetite good.

May 10th.—Getting stronger, feels better and better. Rales in the lung disappearing gradually.

The following days, he leaves his bed and walks about in the house. There is hardly any cough, he eats well."

"Case 2nd—P. L...., *aet.* 18.—Strong, robust, never was sick in his life. Coming back from a dancing party in winter, catches cold and is taken in the evening of the 19th of January 1876 with chill, fever, headache, cough and pain in the side. His mother puts a blister on the side affected. I saw him for the

first time two days after the beginning of the disease. The pulse is strong, full, beats 100. Temp. 40.2. On percussion, I notice at the inferior angle of the scapula of the right side a well marked dulness. Auscultation reveals at the same spot superficial bronchial breathing and bronchophony. No rales perceptible. The cough is moderate; rusty expectoration.

I prescribed: Rest, broth, milk and Brandy, a dessertspoonful in water every two hours.

Jan. 22nd.—Headache gone. Spent a good night. Pulse: 78. T. 39.7 cough troublesome, increasing the pain in the side. Sputa reddish-brown. Diarrhœa, tongue red, wet, no coating.

Opium: 1 grain at bed-time, same treatment besides.

Jan. 23rd.—Pulse: 90. Temp. 41.3, coughs less. Stitch in the side very painful. Tongue a little furred. Cupping in the side.

Jan. 24th.—Pain greatly relieved by cupping last night, but is as bad to day. Pulse beats: 90 Temp. 40. Difficult expectoration of completely bloody sputa. Headache. Same physical signs. Blowing; dulness and no rales.

15 drops of laudanum to relieve the pain.

Jan. 25th.—T. 37.3 P 75. Great deal better. Spent a good night. Does not feel the stitch any more. Headache gone. Expectoration easier and not so red. Large bubbles of subcrepitant rales are heard during the respiration.

Jan. 26th.—P. 68. Temp. 37.5. Good sleep. No more blood in the expectoration; viscid and aerated sputa. Feels the want of eating. Blowing getting weaker and covered with rales.

Same diet and same mixture.

Jan. 28th.—His father comes and informs me that he his up, hardly coughs and feels well.

Jan. 30th.—I call and see him. He is sitting up. Went out the day before; eats well, coughs a little yet. I examined his chest and noticed nothing but a weakening of respiration in the right side."

"Case 3rd.—A. L....., *aet.* 23.—No previous sickness; Shanty-man, coughs since a few days, has a cold in his head. On the 20th February 1876, after been out late, is taken during the night with an exceedingly intense chill, followed by delirium and profuse perspiration. In the morning, vomits a great quantity of bile. The cough increases and the expectoration is tinged with blood. He complains also of a sharp pain on a level with the xyphoid appendix, radiating to the rignt towards the false ribs. Complete anorexia. When I called to see him, he did not seem to be suffering greatly. The skin is hot and dry. The tongue is covered with a yellow coating and the right conjunctiva offers a light subicteroid appearance. Pulse regular, strong: 94. Temp. 40.5.

The apex of the heart beats tumultuously between the 5th and the 6th rib where a soft murmur masks the first sound On percussion and auscultation, I find nothing abnormal in the lungs, neither behind nor in front. But considering the symptoms mentioned above. namely: chill, headache, pain in the side, cough, rusty expectoration, high temperature, and all this after exposure to cold and in a time where pneumonia exists I may say epidemically, I cannot help thinking of this affection in spite of the total absence of physical symptoms perceptible by percussion and auscultation.

Have I not to deal, in this case, with a central pneumonia of the right lung? The reunion of these symptoms is too intense, especially the elevation of temperature on the 2nd day to make me think of an acute endocarditis that might be betrayed by the murmur alluded to. I suspend my diagnosis and prescribe a mild purgative with calomel and rhubarb, followed by the administration of Brandy by dessertspoonsful diluted in linseed tea. every two hours.

Feb. 23rd.—Sleeplessness. However less delirium. Several vomitings since yesterday. Tongue not so yellow. Headache. Pain when he coughs. always felt in the same place. Sputa is viscid, occasionnally rusty, in short pathognomonic; notwithstanding, auscultation and percussion fail to reveal anything yet: no rales, no bronchophony, no dulness. Pulse full, strong: 84. T. 40.7.

Feb. 24th.—Pulse 100. T. 41.3. aerated and rusty expectoration R. 32.

Feb. 25th.—Pulse 100 T. 41.2 R. 36. At last, crepitant rales, and bronchial breathing behind, middle of the right lung.

Feb. 26th.—Restlesness, delirium. Headache relieved. P. 98, R. 33, T. 40.5, bronchophony. I prescribe 15 drops of Laudanum to relieve the cough and the stitch. A dessertspoonful of Brandy every hour.

Feb. 27th.—Although the cough and other pain are relieved, the laudanum seems to have increased the delirium. P. 90, R. 31, T. 39.5. Sputa thinner, no more headache. Subcrepitant rales behind when he coughs.

Feb. 28th.—Delirium. Bad expression. Lingering answers; feels weak, P. 64, T. 37, R. 40. Profuse perspiration last night.

Tr. Bark one drachm every four hours. Same treatment besides.

Feb. 29th.—Better. Good sleep. No more delirium, no more pains. Cough diminished; difficult expectoration of white sputa. P. 53, T. 36.9, R. 29. Blowing weaker, as well as bronchophony. Feels his appetite returning.

March 1st.—Improves rapidly. Bowels opened. Tongue cleaner. Expectoration white, easy. P. 60, T. 36.9. The lung has partly recovered its normal tone on percussion. Few rales

and weak bronchial breathing. The murmur at the apex of the heart does not seem so well marked as at the beginning.

Todd's mixture every two hours, more nutritious food.

March 3rd.—Excellent appetite. Gaining strength rapidly; little cough. Feels well.

I could multiply the number of those observations; but several of them having been taken about the same time, that is, in a time where acute pneumonia seemed to be prevalent as if epidemically, they offer many points of analogy which would render their relation somewhat tedious. I was only anxious to give you an outline of the few cases I have just related and of which I possess several examples, to show that delirium, on one hand, and vigour of the constitution, on the other, does not constitute an impediment to the medication by alcohol but that, on the contrary, the course of the disease in these cases, had lost nothing of its regularity; the crisis taking place at the time indicated by experience and observation.

Now, Gentlemen, is it expedient to employ indiscriminately in all cases the treatment by alcohol in inflammation of the lungs?

It is, at this point, that I expect to meet with difference of opinion between us. "In strong and plethoric subjects that we meet in the country, shall you say, in those vigorous and robust farmers that nothing can overcome, it is dangerous to have recourse to stimulants; we must, on the contrary, wrestle with the disease and remove from the economy the excess of vitality developed by inflammation."

To these objections, I shall answer, that the cases which are personal to me and to which I have already alluded, have been observed in patients born and living in the country and all submitted to the same treatment. Some were young, strong and vigorous, others more enfeebled by age, their constitution or other previous diseases; the result has nearly always been the same.

Besides, consult your memory and say, whether by venesection, emetic, calomel or otherwise you ever succeeded in shortening the duration of inflammation of the lungs? Perhaps you momentarily obtained a remission of the symptoms, but few hours sufficed to make them regain their primitive intensity. A new bleeding would cause an other amelioration and so on until, at last, the resolution would take place spontaneously by itself, fortunate when a sudden collapse produced by these repeated abstractions of blood, did not abruptly end the scene.

Nevertheless, I do not wish to show myself a greater partisan of alcohol than the promotors of the method. Todd himself, did not look upon this medication as indispensable in all and every case of pneumonia although he considers it as always

useful, but the indications of this mode of treatment more especially present themselves:

1st. Each time that exist symptoms of ataxia or adynamia. These symptoms: delirium, coma, stupor amend rapidly under the influence of this medication. Todd considers delirium as the symptom of a viciated and enfeebled nutrition of the brain; we observe it in all debilitating diseases or accompanied with high temperature; therefore it is amenable to the same treatment directed against adynamia.

2o. When the intensity of the fever indicated by thermometer is considerable. Here, perhaps alcohol will not act as a direct antipyretic but in stimulating, strengthening, feeding the organism, it tends to make it recover the normal level of physiological temperature raised by the disease.

3o. When the subjects are alcoholic or weakened by any previous disease.

The mode of administration of alcohol is the capital point of the treatment. The fractioning of doses is the indispensable condition of success. It is not so much a day, we must order, but so much every half hour, every hour, every two hours. Todd gave half an ounce of brandy diluted in water, every two or three hours, when cases of moderate severity, and every half hour, every hour, when danger was pressing.

In France, they did not reach such high doses and Behier does not seem to have given beyond 8 or 9 ounces within 24 hours, prescribing usually from 4 to 8 ounces of Brandy or Rum diluted in the same quantity of water or linseed tea by table spoonsful every one or two hours.

In all the cases confided to my care, I very seldom prescribed more than one to two teaspoonsful of Brandy, given every hour without interruption, during the whole duration of the disease and more or less diluted according to the susceptibility of the patient.