

MAYS (T. J.)

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PNEUMONIA.

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PROFESSOR OF DISEASES OF THE CHEST IN THE PHILADELPHIA POLY-
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FROM

THE MEDICAL NEWS,

January 21, 1893.

[Reprinted from *THE MEDICAL NEWS*, January 21, 1893.]

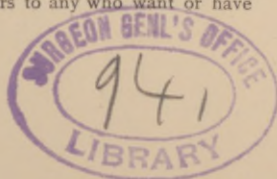
ICE IN THE TREATMENT OF CROUPOUS PNEUMONIA.

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UNDER the title, "Can Croupous Pneumonia be Aborted?" I contributed a paper to *THE MEDICAL NEWS* of September 24, 1892, in which are given the histories of two cases of pneumonia treated principally with applications of ice to the chest. Since that time I have used the same method of treatment in a number of other cases, with equal success, and have considered the subject of sufficient importance to institute a collective investigation on a small scale by sending 500 circulars of inquiry¹ to as many members of the profession, so as to ascertain whether my experience with ice in this disease has been or may be disproved or confirmed. I have already received a number of responses to my circulars, which I shall prepare for publication in due time; but before doing so, and in order to make my collective report as full and as conclusive as possible, I am anxious to correct, so far as I am able, the false and unreasonable prejudice that exists against the

¹ I shall be glad to send circulars to any who want or have not received them.



application of cold in pneumonia—a feeling that I shared myself until I gave the plan a trial—and shall herewith communicate a history of one of my recent cases, the treatment of which has just closed, and which, on account of its interesting course and termination, will, I trust, aid in removing this serious obstacle to the more general use of what I conceive to be a most valuable remedy.

R., male, aged forty-five, was admitted to the Polyclinic Hospital on December 15, 1892, with the following history: He was taken ill with a pain in his left side five days previously. On admission his temperature was 102.6° , his pulse was 110, and his respiration 30; the countenance was flushed; he was restless and delirious; the sputum was rusty and bloody; he had a dry, black coated tongue, a pulse intermittent every fourth beat, and the chlorids were absent from his urine. He had been a hard drinker for twenty years. Physical examination showed dulness extending from the apex to the base of the left lung anteriorly, laterally, and posteriorly. The dulness in the upper anterior half of the lung partook of the nature of flatness. The right lung was normal. Anteriorly there was complete suppression of respiratory murmur in the upper half, and crepitation and partial suppression of respiratory murmur in the lower half; posteriorly in the upper half there were a few moist râles, and in the lower half, bronchial breathing.

His whole left chest was enveloped in ice-bags wrapped in dry towels, and ice was applied to his head on the afternoon of the first day of admission. He was ordered $\frac{1}{20}$ of a grain of strychnine every three hours, and $\frac{1}{80}$ of a grain of the same drug hypodermatically morning and evening, ten drops of the

tincture of digitalis every four hours, and three ounces of fresh beef-juice alternately with a glass of milk containing a tablespoonful of whiskey every hour.

On the 17th, two days after admission, the intensity of the flatness of the upper half of the lung had markedly diminished, and the respiratory murmur and very moist crepitation were now heard in this area; the crepitation and bronchial breathing in the lower half not materially changed.

On the 20th dulness had disappeared almost entirely from the lower half, and had diminished very much in the upper half. The last area was now freely permeable to air, and moist crepitant and subcrepitant râles could be heard all over it.

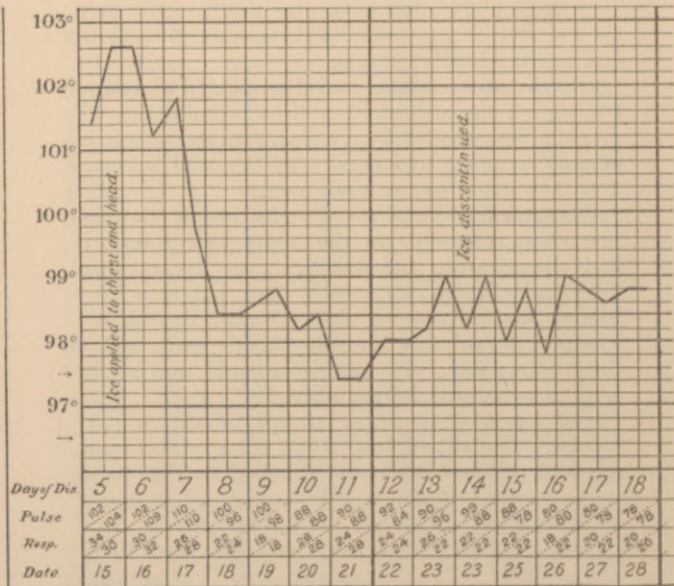
On the 24th the physical signs, except impaired percussion-resonance in the upper half anteriorly, had disappeared, and the ice was discontinued. The digitalis by the mouth, and the strychnine hypodermatically, were also stopped, but $\frac{1}{20}$ of a grain of strychnine by the mouth was kept up three times a day. The beef-juice, milk, and whiskey were continued at longer intervals.

The temperature began to fall on the 16th, the day following the application of the ice, and on the morning of the 18th it was reduced to the normal point, where it practically remained. The sputum continued rusty, bloody, and copious for one week, but the pain and cough subsided soon after the ice was applied. The breathing also became much easier.

On the afternoon of the 18th the low muttering delirium and picking at the bed-clothes, symptoms which were strongly marked in this case, gave way to a most violent attack of delirium tremens. This became so active that it was necessary to strap the man in bed for twenty-four hours, and under the

liberal appliance of morphine, potassium bromide, sulfonal, and whiskey the attack was subdued in about forty-eight hours, and after this he made an uninterrupted recovery.

The accompanying chart illustrates the temperature, pulse, and respiration rate of the case.



This case presents several features upon which I shall in conclusion take the liberty of making a few brief comments.

1. *Prognosis.* Without claiming too much it may be said that this was unfavorable. Every-day ex-

perience teaches that the alcohol-habit creates a predisposition to pneumonia, and that alcoholism is one of the gravest complications of the latter disease. When this condition is taken in connection with the delirium and the picking at the bedclothes it is quite certain that the prognosis was not reassuring in this case.

2. *The resolving power of the ice on the pneumonic exudation.* It is of course well known that cold has the power of contracting the bloodvessels, and with this view of its action it is clear how ice is capable of dissipating an engorged state of the circulation such as is found in the early stage of pneumonia; but when it resolves an inflamed area which, from the absence of the respiratory murmur and the presence of the flat percussion-note, it is quite certain had passed beyond the stage of engorgement and into that of exudation, we are more or less at a loss to account for the mode of its operation. I must confess that the lateness of the time at which the ice was first applied made me very doubtful whether it would have the least influence on this (upper) portion of the lung, and I therefore relied chiefly on its power to check the extension of the disease in the remainder of this organ. That it had this action was well evidenced two days after it had been used, when moist crepitation and the respiratory murmur appeared, showing clearly that the air vesicles were freeing themselves of exuded material and that air again had access to them.

3. *Influence on the symptoms.* In most of the cases that have come under my observation, the pain, diffi-

cult respiration, cough, and expectoration so constantly associated with pneumonia were all notably relieved in a short time after the ice was applied. This alleviation was very pronounced in the case under consideration. Very often it is this feature of the treatment that makes it acceptable to those patients who yield to it at first under strong protest.

4. *Value of strychnine.* The value of strychnine in the treatment of pneumonia has been well demonstrated by Brunton and others, but its efficacy lies only in the administration of large doses and in its being pushed to the point of its physiologic action. When given in this way it is infinitely better than digitalis—in fact, I think the usefulness of the latter drug in pneumonia is greatly over-estimated, and its supposed benefit is founded on a spurious pathology. By the mouth and hypodermatically this patient received nearly half a grain ($\frac{7}{15}$) of strychnine daily for five days with good results. It is needless to say, however, that if he had not been a chronic alcoholic the physiologic limit of the action of the drug could have been reached by giving smaller doses—say from $\frac{1}{20}$ to $\frac{1}{5}$ of a grain every three or four hours, with an extra daily injection of $\frac{1}{8}$ of a grain.

Details of treatment. Surround the affected area, front, side, and back, with rubber ice-bags well wrapped in towels, continuously. Care must be exercised to prevent the ice-bags from leaking, and from moving away from the chest. Place an ice bag on the head. Give from $\frac{1}{20}$ to $\frac{1}{5}$ of a grain of strychnine, by the mouth, every three or four hours, and an injection of $\frac{1}{8}$ of a grain of the same drug once

a day until its physiologic action becomes apparent in restlessness, which may, perhaps, be first observed in the lower extremities, the reflexes of which are usually enhanced. Give morphine hypodermatically to produce sleep, and three ounces of freshly expressed beef-juice¹ alternately with a glassful of milk with whiskey every two hours. If the stomach is rebellious give the beef-juice, milk, and whiskey by the rectum. A tablespoonful of beef-powder in chocolate or coffee is a most valuable food in these cases when given every three hours. In the convalescent stage I have found the following formula very serviceable :

R.—Strychninæ sulph. gr. $1\frac{1}{8}$.
 Syr. acidi hydriodici }
 Syr. hypophosph. } āā f̄ij.—M.

S.—One teaspoonful four times daily.

¹ The Osborne Beef Press, No. 1 or No. 2, may be used to express the juice of fresh beef.

The Medical News.

Established in 1843.

A WEEKLY MEDICAL NEWSPAPER.

Subscription, \$4.00 per Annum.

The American Journal
OF THE
Medical Sciences.

Established in 1820.

A MONTHLY MEDICAL MAGAZINE.

Subscription, \$4.00 per Annum.

COMMUTATION RATE, \$7.50 PER ANNUM.

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