

Smith (Henry)

REPORT

OF THE

Yellow Fever Epidemic of 1873,

SHREVEPORT, LA.

BY

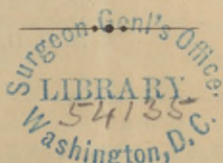
HENRY SMITH, M. D.

MEDICAL EXAMINER

TO THE

Louisiana Equitable Life Ins. Co.

NEW ORLEANS.



NEW ORLEANS:

L. GRAHAM & CO., PRINTERS, 73 CAMP ST., SECOND FLOOR.

1874.

# **LOUISIANA EQUITABLE**

LIFE INSURANCE COMPANY,

**COR. CARONDELET AND GRAVIER STS.**

NEW ORLEANS.

**ORGANIZED MAY 1868.**

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*To the President and Board of Directors of*

*the LOUISIANA EQUITABLE LIFE INSURANCE COMPANY :*

GENTLEMEN—In obedience to your request, suggested by the receipt of a letter from S. M. Asher, Esq., President of your Branch board at Shreveport, dated September 4th, and referring to the epidemic then raging in that city, I left New Orleans on the evening of the 10th of September, and arrived in Shreveport on the morning of the 13th, after a fatiguing journey of nearly seventy hours.

I immediately called on Mr. Asher, with the letters from the Company, and reported myself ready to act in a professional capacity on call.

It is difficult to find language to express the dreadful state of affairs which that afflicted city then presented. The utter panic; the wholesale abandonment of trade; the entire helplessness of hundreds, and the mortal terror of hundreds more, I find it impossible to describe. Remembering, as I now do, the frightful tragedies wherein delirious and fever-tortured human beings were the victims, and the fell destroyer a remorseless conqueror.

Of the true character of the pestilence, on investigation, I was soon satisfied. I need scarcely state that it was genuine Yellow Fever of a very grave type, and much more malignant than any I had met with in previous years in New Orleans, from 1864 to the present year, including the memorable epidemic of 1867.

It behooves all, when danger has passed, to vigilantly guard against its recurrence, and it is with the sincere hope that my personal and close observations for more than two months may, in some measure, tend to that end, and may also serve to mark out the salient features of the scourge, that I present this report. Without entering into the question of the origin of the epidemic, I respectfully submit the following statement and opinions :

SHREVEPORT,

As you are doubtless aware, is on the right bank of Red River, in the parish of Caddo, between 32 deg. and 33 deg. of

latitude, and is naturally a finely located and beautiful town. The business portion of the place, consisting of somewhat compactly built two and three-story brick and frame edifices, is situated on a bluff, considerably above high-water mark at the extreme northern section, with a gradually rising elevation to the southward, along the river bank. Immediately in the rear of the business section the bluff is deeply ravined, and back of this are numerous high hills, on which is scattered a large suburban population. The suburbs on the southwest being connected with the business section by a handsome drive.

With the ample facilities for drainage that this singular topography affords, that essential sanitary measures seem to have been sadly neglected. The overflow of what is known as Silver Lake and other marshy localities, as the Spring advances, naturally fills the atmosphere with miasmatic vapors, the source of fevers of every kind. The declivity between the front and rear portion of the city which, with but trifling engineering skill, could have been culverted and converted into an effectual sewer, became a cesspool for the reception of dead animals of every kind, and a wallowing place for others. Here too, and at many points within the business section of the city, the offal and garbage were permitted to fester in the sun, and the combined effluvia created a stench absolutely unbearable. In addition, a number of cattle, drowned at the wreck of a steamboat two miles below the city, were hauled on shore, skinned and their carcasses permitted to rot in the open air.

### THE CONSEQUENCE

of a sanitary condition so alarming was not difficult to foretel. Diseases such as small-pox, cholera and spinal-meningitis soon marked the progress of events. The ordinary fevers of summer speedily assumed a more malignant type. Figuratively speaking, the sulphur, saltpetre and charcoal were slowly blending, and it required but the spark contained in a disease of pronounced malignancy for ruin and utter destruction to ensue. When the terrible blow did fall, it struck the luckless community almost simultaneously in three places: On Texas street in the centre of the city near where the

Trans-Atlantic Circus was quartered; in a levee street boarding-house; and at a point near the river bank, two miles below the city, where the cattle were skinned. The three points are nearly on a direct line, running north and south.

### THE CITY IN SEPTEMBER.

Arriving then in September, I found places of business closed and the streets deserted. Of a population numbering usually ten thousand in summer, and twelve or thirteen thousand in winter, and composed chiefly of unacclimated persons from all parts of this country and Europe, more than half had fled. Of those who chose or were compelled to remain, upwards of eight hundred were prostrated. More than five thousand of the panic-stricken had sought safety—many alas! vainly—in the surrounding country. The city was quarantined against all adjacent towns, and the telegraph was the only means of communication.

Although the first, a doubtful case terminating in death, occurred on the 18th of August, a second, certainly of Yellow Fever, on the 22d, with cases following in rapid succession, the disease was not sufficiently pronounced to be recognized as existing in epidemic form until the 4th of September. Up to the time of my arrival (Sept. 13th), no infirmary for the indigent or uncared for had been established. In conjunction with the Howard Association of Shreveport, through its worthy and efficient President, we proceeded at once to organize a hospital in the Tally Building, on Milan street. This was effected within twenty-four hours, and in two days it was filled. This institution, which remained open day and night for six weeks, relieved much suffering and proved of inestimable value to the public.

### THE SICK.

My attention was next directed to the other sick of the city, and although representing the interests of the Louisiana Equitable Life Insurance Company, I had tendered my services and had been accepted by the Howard Association of New Orleans, and with a corps of professional nurses, engaged by them, was the first to arrive at our destination.

Realizing the dreadful condition of affairs, I entered vigorously upon the work before me; the more so as there was already a scarcity of physicians and nurses; denying none, as far as possible, the benefits of medical treatment.

Buggy and driver, and the requisite reliefs of horses, having been furnished, the subsequent days and nights for six weeks were fully occupied. In order that you may understand the extent of the disease, I would state that the attendance upon the sick usually commenced at 7 or 8 o'clock, A. M., and frequently at day-light according to the emergency. The labor did not end until every patient had been visited once, and some as many as two, three, and even four times during the twenty-four hours. During a day I have seen as many as fifty-six persons, and have been driven constantly from day-light in the morning until one o'clock of the next.

#### THE DISEASE

Was found to be very violent from the first, in many instances attacking the brain and not terminating under three days. The worst cases were unusually long in convalescing, and especially prone to relapses on the slightest imprudence. Many cases, and particularly the relapsed, required twenty, thirty, and even forty days, and in one instance the longest probably on record terminating in perfect recovery, occupied a period of seventy days.

The fever came in the usual way, often sudden, with rapid pulse and high temperature, generally preceded by a severe chill, often of long duration, with severe pain in the head and back; sometimes confined to the limbs alone, occasionally accompanied by spasm in the lower extremities, similar to that of Asiatic Cholera; while slight or entire absence of pain characterized some of the milder attacks.

The fever, however, was of a far more malignant type, and much higher than ordinarily. The skin hot and dry, the pulse full and strong, ranging from 120 to 140 and upwards. The tongue was coated, often dirty, and usually presented a dark, flabby appearance; with some it was dry and pointed, occasionally parched with extreme thirst of the mouth and fauces.

The average duration of the febrile paroxysm was sixty hours, or about two days and a half—the shortest six, and the longest 136 hours, the latter constituting *five days and a half and four hours* and terminating in prompt convalescence and speedy recovery. This state was usually succeeded by a corresponding depression of all the vital powers. The pulse would often decline from 140 or 120 to 80, 70 and even 50, in an almost incredible short space of time. In one case, coming under my observation, the pulse sank gradually to the alarmingly slow rate of *forty* beats in the minute. This case made a good recovery.

In the graver cases the face presented a suffused appearance, with the eyes highly injected. Extreme restlessness or great alarm was often present, the patient struggling to get out of bed, and culminating in furious delirium, but generally of a milder character, while profound stupor often marked the last stages. In a few of the death scenes that I witnessed, not a ray of thought was manifest; in others the intellect was retained to the last.

The perspirations were variable; sometimes only partial, sometimes irregular, occasionally offensive. The usual appearance of the skin was often wanting, but it was bronzed in some cases and afterward yellow. In many of the fatal cases simultaneously with yellow eyes and skin, black stools, reddish dark urine, and bloody vomit, the skin was often covered with bluish or black blotches increasing to large size dark patches after death, occasionally even before the fatal termination. During convalescence, abscesses and eruptions on the face were frequent, and desquamation of the cuticle was very common, particularly on the hands, feet and face.

While a correct diagnosis was occasionally difficult, the tongue, mouth and gums usually presented all the characteristics of the disease, and together with the urinary tests, were sufficient to decide particular cases.

A noticeable fact was the rarity of black vomit, and the number of patients who recovered from it. It was found that, in a large proportion of cases, the poison determined to the kidneys early in the disease, frequently causing suppression or

urine and death on the third or fourth day, proving more fatal than black vomit. Retention of the urinary secretion was common, requiring the frequent and free use of the catheter.

#### TREATMENT.

Every physician of the present day must acknowledge that good nursing is half the battle, and every case of yellow fever no matter how slight the symptoms may appear, should be regarded as serious. Premising the disease to be a self-limited one, and therefore destined to run its course, cannot be arrested or cured by drugs.

The secretions being either perverted or arrested, and the kidneys and skin seeming to be best suited for the elimination of the poison without exhausting the patient, measures should be employed that are best calculated to promote the free exercise of these organs as well as to equalize the circulation—hence the great benefit from the free use of warm or hot mustard foot baths, the vapor bath, and with children, the warm bath, in conjunction with frequent draughts of warm lemonade or orange leaf tea. But especially would I call attention to the importance of maintaining rest in bed, and guarded care as to both *diet* and *drink*. My practice being usually to withhold food of every kind during the active fever stage, allowing small quantities of ice water, frequently repeated with a moderate use of ice for the thirst, and cold applications to the head. On the subsidence of the fever, say the third or fourth day, to begin cautiously with nutriment in the form of chicken tea, beef essence in small quantities, or rice gruel, continued at regular intervals, even for several days, followed in turn by small pieces of tender beefsteak, to chew, and the juice only swallowed, which has sometimes proved better than either, particularly when more nourishing diet is indicated; and later, as convalescence becomes established, a soft boiled egg, with toasted bread and a cup of black tea, with a little sugar and milk in it. In many cases the course indicated above, with careful nursing, was all that was necessary—but in cases of extreme depression or exhausted vitality (and there were many), great benefit was derived from the judicious use of stimulants, as genuine Bremen beer, fresh Champagne or best Cognac.



Strong and vigorous persons seen early in the attack, were treated with a brisk cathartic, say castor oil or the well known purgative lemonade, very few with calomel, except for derangements of the liver, previously contracted; drastic or strong purgatives very seldom and never during the second or calm stage. A strict discipline over the patient was enforced and the nurse always instructed to carefully watch the effects on the stomach; to discontinue all medication and diet by the mouth, when from any cause there seemed to be disagreement; and instead, to administer in larger quantities at longer intervals, by enemata (injections).

Through a careful and persevering use by the latter method, including diet, stimulants or any medication that was indicated, where the stomach from any cause was found too weak or too irritable to bear even the smallest draught of cold water, I am satisfied that many were saved who would have otherwise been lost.

Best iced champagne often acted admirably in allaying the irritability of the stomach and calming the patient. The application of sinipisms over the stomach and other parts of the body, assisted by dry cups, were found beneficial in equalizing the circulation, and proved of great service in determining the disease from any particular organ.

The fly blister was rarely resorted to, except in apparently fatal cases.

The nurse was advised to attend guardedly in properly covering the patient, to meet the sudden changes of temperature, and never permit excess of blankets; at the same time to secure free ventilation, with a small wood fire at night should there be dampness of the apartments.

The usual diaphoretics and diuretics were made use of to favor the action of the skin and kidneys, combined or in conjunction with *aconite*, during the height of the fever. My usual method was to begin early with this remedy, combining Fleming's tincture with the above, or with the neutral mixture (U. S. P.), in quantities of from four to twenty-four drops to a four ounce mixture, in doses of a dessert to a tablespoonful, frequently repeated, according to the stage of fever and the age and condition of the patient. The remedy being a powerful one, should

be cautiously administered, and its effects watched by the physician in attendance. Of course this, like all remedies, may sometimes prove inadequate in controlling the high fever, as all efforts sometimes fail, but I am compelled, from ample trials to regard it as one of the most useful in this disease, if not *the best* single remedy in the whole catalogue of medicines; having been frequently surprised at its wonderful effect in exciting the action of the skin to free—sometimes copious perspiration. The remedy appeared to exert a great controlling influence over the heart's action, and indirectly over the nervous system, thereby moderating the intensity of the fever and calming the patient; but must not be continued too long, particularly after its sedative effects have been obtained.

Generally where there is suppression of urine, no good can be derived from sedatives or the various preparations of opium. In such cases, counter-irritants to the surface and the prolonged use of the hot bath, remain the only hope of benefit.

Blood letting by cupping, proved beneficial in the first stage, but must be practised with caution on account of its depressing effects on the heart's action and nervous system.

Solid food in the first stages was strenuously abstained from.

Opiates, as a rule, were found inadmissible. Anodynes, other than opium or its products, proved safer and quite as efficient, and are therefore to be preferred.

Cases which came under my observation satisfied me that quinine cannot be used in uncomplicated yellow fever, particularly during the early stage, and may do absolute harm by increasing the head symptoms, and in large doses may hasten the fatal termination. But its power to arrest or ward off malarial fevers, is undoubted, consequently of great service in malarial districts, where there is good reason for suspecting malarial complication; in such cases I prescribed it.

As the minutiae of the treatment of yellow fever cannot be given in this condensed history of the disease, I shall pass from the treatment to the

#### RESULTS.

From a total of *twelve* insured cases, ten of which were undoubted yellow fever, I treated for the Company six—  
Four from the beginning of the attack.

One under treatment of the family physician up to the third day, and

One abandoned relapsed case.

With the results of five recoveries and *one* death, that of Mr. Samuel Peters.

The total number of deaths of insured persons was *four*, all by yellow fever, three of whom had their family physician in attendance; of these. I saw one on the date of my arrival, a second two days afterwards, and a third later in the epidemic—all were seen but a few hours preceding death, and under circumstances which promised no hope of recovery.

From the 13th of September to the 17th of November, I treated 243 cases of unequivocal Yellow Fever, 42 of other diseases, and three doubtful, making a total of 288 cases by visits alone. Of this number 236 were white, and 52 colored. The adults were 216, children 72. Of the 243 cases, *thirty-one* died. Of the 42, with three doubtful, 45 of other diseases, two died; one of chronic jaundice, and one of congestive fever, both colored.

In addition to the above, I saw 38 of abandoned, neglected or consultation cases, with 21 deaths, the latter having been seen, with few exceptions, from one to a few hours preceding dissolution, where a fatal prognosis was given and where little or no relief was to be expected from treatment of any kind. Besides the above 55 obtained relief by prescriptions at the office of the Howard Association, among them a few lingering or imperfectly convalescent cases of Yellow Fever, but mostly of other diseases, where the persons, from pressure of circumstances, could not be visited. In the above statement, I have included none of a full list of the indigent half-starved, who presented themselves and were relieved through written orders for food, stimulants, etc.

NOTE.—For the convenience of readers, below will be found a tabulated statement of results of my experience during a period of nearly ten weeks.

YELLOW FEVER.	Children.	Adults.	Total.	Deaths.	Per Cent.
Original Cases.....	70	173	243	31	12½

## RECAPITULATION.

No. of cases	Yellow Fever, by visits	243
“	“ other diseases, “	42
“	“ doubtful “ “	3
“	“ consultation, etc., “	38
		<hr/>
Total number treated by visits		326
“	“ prescribed for in office	55
		<hr/>
Total number treated and prescribed for		381

More than one-half of the cases were very severe, the patient being for several days in a critical and even dangerous situation. Six cases were complicated with abortion, one of which died. Five recovered after pure black vomit—two children and three adults. A few of the cases assumed a typhoid condition, the sequel of Yellow Fever, and three died from four to six weeks after the day of attack. I would be pleased to hear from the other physicians who labored zealously for the relief of stricken Shreveport, but up to the date of writing, I have seen no careful record of the disease and the results of treatment by others. I have, therefore, nothing to give the reader but the positive, although imperfect, results of my own observation and experience, necessarily so from the enormous labor performed. Presuming the statement from my own experience during the present and past years, that as no two epidemics of Yellow Fever are alike, and the most prominent symptoms or effects in the one are often wanting in the other, that, therefore, no treatment can be laid down which it would in all cases, be safe to follow. And while it becomes our duty faithfully to show what we did and the results that followed our action, under certain circumstances, in the treatment of this disease, as in every other, everything must depend upon the discretion and sound judgment of the attending physician.

## STATISTICS AND REMARKS.

Up to the date of my arrival there had been one hundred and forty-six deaths; a climax was approaching, and on the 15th September, the mortality was greater than at any time during the epidemic, numbering thirty-four deaths, and not until the

30th were there signs of abatement. The epidemic terminated on the 26th October, in the city, but still raged in the suburbs. On the 28th and 29th there was a change in the atmosphere, with ice in abundance.

On the 3d November, the epidemic being virtually at an end, the quarantines on the Texas and Pacific Railroad were raised, and the trains allowed to arrive and depart after an interval of suspension, during two months.

The total number of cases was between 2,500 and 2,600; total number of deaths, 769; of these 150 were colored, as is usual the latter suffering in a less degree than the whites. Mortality about  $32\frac{1}{2}$  per cent., or 325 per thousand of those attacked; 163 per thousand of the population present; and about 85 per thousand or  $8\frac{1}{2}$  per cent. of the total population.

The ages of 584 persons who died, have been ascertained, and are as follows:

100	died	under	ten	years	of	age.
93	were	between	ten	and	twenty.	
156	"	"	"	twenty	and	thirty.
134	"	"	"	thirty	and	forty.
59	"	"	"	forty	and	fifty.
29	"	"	"	fifty	and	sixty.
13	"	"	"	above	sixty.	

It will be seen that the greatest mortality occurs between the ages of twenty and thirty years, and the next greatest from thirty to forty, the period of life when the human system ordinarily has most capacity to resist disease.

The disease having first attacked the central portion of the city, afterwards extended to the suburbs, and crossing the river, spread in all directions, and was carried many miles into the surrounding country. In order that an estimate may be formed of its extent, I may here state that in a boarding house on Travis street, twenty-six (26) persons were said to have been attacked and died. Whole families were taken down in the short period of a week.

At my arrival, the number of deaths among those attacked was estimated at as high as eighty per cent. This rate, however, rapidly diminished; but was attributable more to a better understanding of the disease, with approved treatment and

sadly needed improved nursing, than to the purification of the atmosphere or the lack of malignancy of the disease.

In conclusion, from all the facts, I believe I am warranted in stating that history furnishes no parallel of an epidemic of Yellow Fever, save that of Norfolk, Va., in 1855, more virulent in its type, more malignant in its attack, or more fatal in its effects, than that which has visited the peaceful and prosperous city of Shreveport, and which made so memorable its epidemic of 1873.

From the fact that the insured in the Louisiana Equitable Life Insurance Company were included in the class of wealth and intelligence, many were enabled either to take refuge in places remote from the fever, or of those who remained, to adopt such measures and obtain such care and comforts, as was best calculated to carry most of the cases to a successful termination. In my humble judgment, considering the important interests involved, the Company which I had the honor to represent, has just cause for congratulation, not only in point of the number of deaths, but also in the proportionately moderate sum of its losses.

I am, gentlemen, very respectfully,

Your obedient servant,

HENRY SMITH, M. D.

# Louisiana Equitable Life Insurance Co.

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