RECUPERATIVE POWER IN ADVANCED AGE.

BY J. B. AYER, M.D.

THE influenza epidemic has of late directed our urgent attention to the care of our aged patients.

Unquestionably, knowledge of senile diseases requires some special study and experience. This is shown by the fact that we are too easily satisfied with the simple classification "old age," in rendering the cause of death of elderly patients.

In spite of many valuable works upon diseases of the old, notably Charcot's "Lecture upon Senile Disease," Fothergill's "Diseases of Sedentary and Advanced Life," Professor Humphrey's "Lectures and Statistics on Old Age," and Balfour's recent lectures upon the "Senile Heart," I feel that no subject of equal importance to the practitioner of medicine has been less discussed.

When does *old age* begin?

Allchin finds all the symptoms of senility in some individuals under the age of twenty, when there is a failure of trophic influence due to exhausting illness.

On the other hand, I have in mind a gentleman of eighty-one who has lived a life of the greatest usefulness to his fellow-men, whose mental faculties seem unimpaired in spite of physiological tissue atrophy. In travelling and lecturing, he is still active and enthusiastic, and is practically younger than the majority of men at forty.

In the report of our Board of Health for 1891, deaths are credited to old age as follows:

	Males.	Females.
40 to 50 years	1	0
50 to 60 "	0	0
60 to 70 "	8	10
70 to 80 "	34	61
80 to 90 "	54	78
90 to 100 "	15	28
100 "	0	1
	112	178

In New York City the causes of death are stated:

	Males.	Females.
Under 45 years	1	2
45 to 55 "	7	5
55 to 65 "	13	23
65 to 75 "	42	83
75 to 85 "	92	153
85 "	38	112
	193	378

In the mortality reports of New York City, the period between twenty-five and forty-five is classed under the head of maturity; forty-five to sixty-five, decline; and sixty-five, old age.

If we take either sixty-five or seventy years as our standard of old age, it will be seen that in both cities there are a large number of cases of premature old age reported.

RECUPERATIVE POWER OF THE AGED UNDER-ESTIMATED.

Professor Humphrey says: "The rallying power in old patients is underrated. While they have difficulty in withstanding the tidal flow of senile disease, we do not credit them with sufficient recuperative power during the ebb."

"The paradox that the failure and suspension of nutrition, which mean sinking and death should be near neighbors to repair and recovery," he hints "may be partly explainable by the lowered irritability due to

lessened nerve susceptibility of the senile frame, which gives it much immunity from disease."

A recent case of a patient seventy years old in the Channing Home, in the last stages of consumption, and also mildly maniacal for years, comes to mind as a good illustration. Last winter a large carbuncle appeared upon her shoulder. With all the care we could give her it was impossible to keep on the dressings, as she had hallucinations of hearing which directed her to attend to the treatment of the case herself. In spite of constant irritation, however, the arm healed in a moderate amount of time.

Surgery is full of remarkably successful results under equally trying circumstances.

INFLUENZA MORTALITY AMONG THE AGED.

The mortality records of the Boston Health Department (and here I wish to thank the officials for their kindness in furnishing me with many more facts than I can utilize in this short paper) show marked epidemic influence upon elderly people during the last few months. Between December 12, 1891 and February 29, 1892, out of 72 uncomplicated fatal cases of influenza, 33 had reached the age of seventy; out of 133 complicated cases, 47 were seventy years of age; in all 80 out of 205, nearly 40 per cent.

In New York City the mortality in 1891 was very large among elderly people, as may be seen by the following table kindly furnished me by Dr. Roger Tracy:

OVER 65 YEARS.		
	Males.	Females.
1888	1,760	2,056
1889	1,742	1,998
1890	1,879	2,172
1891	2,072	2,519

As influenza seeks out the weakest part of the system for its attack, in the aged as well as in the young, it will be interesting to compare recent statistics of the causes of death.

DEATHS IN BOSTON. PATIENTS OVER 70 YEARS.

Disease.	1889.	1890.	1891 to Apr., 1892.
Heart disease	167	160	221
Apoplexy and meningitis	121	112	158
Pneumonia	86	121	291
Cancer	59	57	63
Bronchitis	56	76	162
Phthisis	28	27	48
Bright's and nephritis	33	47	63
Diarrhoea and dysentery	30	18	39

DEATHS IN NEW YORK CITY. PATIENTS OVER 65 YEARS.

Disease.	1889.	1890.
Apoplexy, including meningitis, encephalitis, hemiplegia, softening of brain, brain-paralysis	450	461
Bright's disease and albuminuria	448	479
Heart disease	406	399
Pneumonia	346	458
Phthisis	222	200
Bronchitis, emphysema and asthma	190	333
Cancer	167	205
Diarrhoeal diseases	167	102

¹ Read before the Boston Society for Medical Improvement, April 25, 1892.

These tables show that pneumonia has of late outstripped its competitors, heart disease and apoplexy, in Boston, and has gained rapidly upon apoplexy and Bright's disease, and gone ahead of heart disease, the three prominent causes of death among elderly people in New York; and that bronchitis has assumed great importance in both cities.

UNEXPECTED RECOVERIES FROM INFLUENZA.

In looking over my notes of elderly people during the last twenty-eight months, I have been surprised less by the increase of deaths than by the many unexpected recoveries. This fact has made such a strong impression as to be the cause of writing this paper.

An illustrative case occurred last January. A gentleman of eighty, after ten days' illness from influenza-bronchitis, was apparently entering a comatose condition, with threatening heart failure. The breathing was favorably influenced by oxygen; but during three days I gave an unfavorable prognosis, while he was verging upon the comatose state. Unexpectedly, but slowly and steadily, he rallied, and in the course of six weeks had recovered from the pulmonary trouble, and had nearly regained his strength.

Another case: In April, 1891, a lady, sixty-three years of age, with double asthenic pneumonia of influenzal origin, with delirium and subsultus tendinum, warranted an unfavorable prognosis during a whole week of the illness, but surprised me, nevertheless, by making an excellent recovery in the course of a few weeks, and is to-day probably as well as if she had not been through the sickness.

A third patient, a lady of sixty-four, I attended for influenza-pneumonia in May, 1890, added to chronic pulmonary tuberculosis. For several weeks, the prognosis was absolutely unfavorable. To my surprise, she began to improve, although bacilli were found in the expectoration; and last summer, she was out-of-doors. There was an unimportant relapse of influenza last January, from which she made quick recovery. Although examination of the chest shows now extensive consolidation, she is in far better condition in flesh than two years ago, and is able to be out-of-doors.

A fourth patient, Mrs. C., eighty-one years of age, has twice been seriously ill from influenza, — in March, 1891, and January, 1892, — with severe respiratory, gastric and nervous symptoms, threatening pneumonia, heart failure and persistent gastric irritability. But, on both occasions, she sufficiently rallied in two weeks to be out of danger, and in a couple of months, to seem improved from the illness through which she had passed.

A fifth case, I will briefly mention, of influenzal broncho-pneumonia, where there was great dyspnoea and lividity. These symptoms were relieved by oxygen gas. On the ninth day, the fever declined, and the chest symptoms became less marked. For several days it did not seem that she could summon sufficient strength to rally; but gradually she began to gain a little, and in two months made a perfect recovery.

These cases are types connected, I feel, with the experience of most physicians during the epidemic. Last winter, particularly, was the recuperative power in elderly people most severely tested, and proven to exist. I think I was warranted in the conclusion that no accurate prognosis regarding the outcome of the sickness of elderly people could be made. Prognosis

was uncertain, like everything else connected with influenza.

MARKED RESISTANCE TO DISEASE SHOWN IN CASES WHICH ULTIMATELY PROVED FATAL.

Good evidence that elderly people have great recuperative powers, has also been shown by their prolonged resistance in fatal cases.

I can mention the case of Mrs. M., colored, eighty-one years of age, previously well, who on returning from church March 27, 1891, was attacked by asthenic pneumonia of the left side. On April 6th quiet delirium was noted during tardy and incomplete resolution. The head was thrown slightly backward; there was great pain and stiffness of the neck, especially when the head was turned to the left. In addition to these cerebro-spinal symptoms, she had delusions against taking food, and would push us away, if we tried to feed her. She would draw the clothes over her head, to prevent us from giving her food. She made such opposition to nutriment enemata, that her daughter objected to their use. For days in succession, she took no nourishment. For the week from April 27th to May 4th, the total amount noted was two ounces of liquid nourishment and one ounce of wine. She wasted away rapidly; as during nine weeks, the largest amount of nourishment taken in any one day was three ounces. I often thought she was in a dying condition, but she would unexpectedly rally. Resolution ceased in the lung, one-quarter part remaining solidified. She became hemiplegic three days before death. Drs. Jelly and Sears will recall her persistent refusal to take food, and how mistaken we were in foretelling the date of her death.

A similar experience with Mr. K., seventy-seven years of age, seems worthy of record. His previous history is unknown. Early in January of the present year, I found him suffering from influenza, cardiac irritability and indigestion being the principal symptoms. An examination of the urine soon showed nephritis, one-quarter to one-half per cent. of albumin, and casts of all kinds, and that the urea was reduced to half the normal amount. The uramic symptoms, with threatening cardiac failure, were so marked that on several occasions, death seemed imminent; but the patient unexpectedly rallied. A fortnight before he died, the disappearance of pulse indicated, to my mind, impending death, and I hastily notified his relatives, who had come from a distance, that he could not live an hour. Dr. Townsend, who saw him frequently, was equally convinced that no prognosis as to time of death could possibly be made in a case like this.

REVIEW.

It has struck me as a remarkable fact that mental and nervous symptoms, irritability, hypochondria, and apprehensive fears, if of influenzal origin, have in a great portion of our aged patients cleared up remarkably. Chronic cases of mental disorder, chronic heart trouble and pulmonary trouble have not been aggravated permanently in so large a proportion of cases as I should have expected. I have been surprised at the number of elderly patients with irregular and interrupted cardiac action, due to influenza, persistent "off and on" for a long time, the symptom proving to be one of little importance.

After looking over my notes, I became convinced that elderly people had done a great deal better in the

late ordeal than I had supposed, when they had not succumbed at the onset, or soon after, to an acute exacerbation of the attack. Most of them (perhaps 90 per cent.) have slowly and interruptedly "worried" out of it, and at the end of two or three months been restored to their usual health. A small percentage of my elderly patients have been left in a state of chronic debility — on a much lower plane of health, but perhaps an equal number have been permanently improved by the long rest enjoined during convalescence and for several weeks after recovery.

TREATMENT.

We can agree with Allchin: "We are encouraged to do all we can for the aged by finding that not a few of those who survive the initiatory stages of illness hold on through the attack, even though it be severe, and make their way to complete, quick and surprising recovery."

The effect of good nursing, strict care regarding the quantity and character of food, equable temperature, an easy mind, and agreeable but quiet surroundings, upon our elderly patients often seems miraculous.

On the other hand, when elderly people do not have a strong desire to get well, they are seriously handicapped in the struggle with such an adversary as Influenza.

ELECTRICITY IN THE TREATMENT OF GASTRALGIA AND ATONIC DYSPEPSIA.

BY A. D. ROCKWELL, A.M., M.D., NEW YORK.

MUCH difference of opinion exists concerning the cause and character of the distressing symptoms that we term gastralgia. Neuralgia of the stomach is undoubtedly associated with, and is an expression of a variety of pathological conditions. The slight heaviness or fulness after taking food, characteristic of chronic gastritis, hardly amounts to a neuralgic pain; but in atonic dyspepsia the pain is occasionally acute. Both ulceration and cancer of the stomach cause the severest pain, and are susceptible only of slight relief through electricity. Chronic catarrhal gastritis occurring in the gouty subject is another cause of gastralgia, for the relief of which dependence must be placed upon remedies other than electricity. Experience clearly shows, however, that there does exist a form of gastralgia dependent neither upon inflammation nor organic disease, entirely functional in character, and relievable by very much the same methods as neuralgia in other parts of the body.

Electricity enables us not infrequently to diagnose between gastralgia dependent upon organic changes in the stomach, such as ulcer, beginning carcinoma, etc., and gastralgia of the purely neurotic type. A case in point occurs to me. Some time ago I was consulted by a gentleman for a severe pain in the stomach, that had persisted for more than six months. The character of the pain was suspicious, and he had been told that the cause of it was ulceration. As in pain from that cause, so the pain in his case was referred to one spot in the epigastrium and in the back. When the stomach was empty, but little if any pain was experienced; but, in a very few moments after eating, the distress was often extreme. The first application of electricity was made at the beginning of a severe paroxysm of pain, and within five minutes it

disappeared completely. This result indicated very clearly to my mind, that we were not dealing with an ulcer, for in a number of cases of this character which have fallen under my observation, every one had failed to be relieved by any form of current or any method of application.

It is not to be expected that this aid to differential diagnosis never fails, for true gastric neuralgia may resist the action of the current, as do other neuralgic types. When, however, it does relieve as promptly as in the case just referred to, its diagnostic value is undoubted.

In treating gastralgia both forms of dynamic electricity have proved effectual, and in the selection of the current, one must be governed by the special indications in each individual case. Not infrequently indeed, it will be found impossible to determine which form of current is best adapted to the case in hand until actual trial is made. In a considerable experience, however, in the treatment of gastralgia, I have found that in those cases where firm pressure over the seat of pain tended to relieve rather than to increase the pain, the faradic current of high tension, or the rapidly interrupted static induction current yielded the best results. On the contrary, when the part was sensitive to pressure, pain being increased rather than relieved, the galvanic current generally proved most effective. In one case of gastralgia in which the faradic current of high tension was indicated, but which failed to accomplish very much, the static interrupted current succeeded in affording speedy relief.

In using the galvanic current, I prefer electrodes of plastic sculptors' clay, placing the anode over the seat of pain. In this way currents of twenty to thirty milliamperes, through a comparatively small electrode, are easily endured.

The integrity of one's digestive powers depends upon the tone of the muscular tissues of the stomach as well as upon the healthful action of the nerve-centres and connecting nerves. The vast majority of cases of confirmed indigestion for which relief is sought, depend upon no structural change in the stomach but are occasioned by a deficient secretion of gastric juice or a defect in the muscular tone of the organ. The resultant feebleness of the viscus lessens the activity of the characteristic churning movements that attend the digestive process, and the first act of digestion is unduly prolonged. Atonic dyspepsia is sometimes hereditary and in such cases tends to manifest itself rather early in life, but when no hereditary tendency exists, the disease is more often one of later years.

Like all other organs, the physiological activity of the stomach declines as years increase, and dyspepsia among the aged is a common symptom, while among the younger and well-to-do portion of the community who suffer from atonic dyspepsia, the cause is usually to be found in an undue amount and frequency of food. Then, again, under the mistaken idea, that conditions of debility must be corrected by the frequent and large ingestion of food, the stomach is never allowed a sufficient period of repose. The poor as well as the rich suffer from this form of indigestion.

Innutritious as well as insufficient foods are potent causes of atonic dyspepsia, the cure for which is in many cases simply a more generous diet. Anything, indeed, that interferes with the secretions of the stomach, or with its muscular action, tends to weaken the function of digestion. Atonic dyspepsia is, there-