ion upon everything under the sun. Sometimes a little waiting will determine matters. A case examined a year ago presented nothing but purely subjective symptoms, and to-day there is atrophy of an arm. In another instance, a laborer fell partly into a coal hole, with one leg in and the other out, and after a year is unable to do any work, but there was such an utter absence of anything in the way of electrical or other findings, and so many of the ordinary symptoms of Erichsen's disease were missing, that Dr. Cleverger told the lawyers that everything depended upon the credibility of the patient, and he preferred having nothing to do with the case as it stood at present.

We find instances, in and out of the books, of fatal issues among patients accused of malingering. We occasionally find a conscientious railway surgeon who acknowledges that railway accidents do not always improve health, and that a few dollars' settlement will not resurrect the dead.

A CASE OF GASTROSTOMY.

BY GEORGE W. GAY, M.D.,
Visiting Surgeon to the Boston City Hospital.

EARLY in the summer of 1889, Mr. W., a large-framed, powerfully built man, about fifty years of age, came to my office, complaining of inability to swallow anything but liquids. This difficulty had been gradually increasing for about a year. He had lost much flesh and strength, and was slowly starving to death. Hungry all the time; felt that he could eat anything, and in large quantities, if he dared to do so. He was obliged to confine himself to liquids, and could take those only in small sips, otherwise they were immediately regurgitated. The first mouthful, as he said, was all right, but after that "everything comes up." There was no sharp pain, merely a sense of pressure. Had lost thirty pounds in weight during his illness, and was in a pitiable condition.

On exploration with the œsophageal bougie, only the next to the smallest size could be passed through the stricture, which was located behind the sternal notch. Glands in the neck were somewhat enlarged. Nutritive enemata of milk and beef juice were ordered every six hours. These afforded only partial relief, and the man begged to have something radical done. He was anxious to take any risk for relief, and under the circumstances I finally consented to accede to his urgent solicitations to open the stomach, in other words, to do gastrostomy.

The operation was done at the City Hospital, under ether, on July 21, 1889. An incision four inches long was made, an inch and a half below the border of the ribs on the left side, commencing about two inches to the left of the ensiform cartilage. On dividing the peritoneum to the extent of an inch and a half, the stomach was found collapsed about five inches from the anterior abdominal parietes. It was drawn into the wound, and placed under easy control by means of two wire loops about three-fourths of an inch apart, passing through the outer coats of the stomach. The organ was then secured to the edges of the wound by means of silk sutures, the peritoneal surfaces being carefully apposed all around the abdominal incision. Finally, with a tenotomy knife an incision, or rather, a puncture, was made into the stomach not over a quarter of an inch in size; just large enough, in fact, to

admit the point of a small glass tube, which served as the nozzle to the syringe or feeding apparatus. Eight ounces of warm peptonized milk were slowly injected into the stomach, and the small opening securely closed by simply twisting the wire loops very loosely. The dressing consisted of iodoform gauze and swatches.

The patient rallied well from the anæsthetic. He was fed every five hours in the following manner: Half a pint of warm peptonized milk, with or without bovine, was slowly poured into a small glass funnel, to which was attached a rubber tube about two feet in length, this being about the fall required for the liquid to flow easily into the stomach. The patient declared positively and repeatedly that he felt much less hungry, and less prostration and restlessness after the artificial feeding was commenced. He even felt so well that he got out of bed, although warned against doing so. He lay in bed, received his food regularly, and was comparatively comfortable, requiring no morphia till eight days after the operation, when he was seized with severe pain in the epigastrium, due probably to separation of adhesions about the wound. The distress was readily controlled with morphia, given under the skin. Two days later he had a sudden and severe attack of dyspnoea, amounting, in fact, to orthopnoea. It did not persist, and gave little trouble afterwards.

Fifteen days after the operation some difficulty was met with in trying to introduce the tube into the fistula, and the liquid caused pain, indicating that, in all probability, it did not enter the stomach directly, if at all, but rather some adventitious cavity outside that viscus, a fact proved by the autopsy. Rectal feeding was substituted for three days, when the method by the artificial operating was again resumed. At this time the stomach began to get irritable, and the food was rejected soon after being introduced. The strength began to give way; a moderate febrile condition developed; consciousness was retained to the last; food was rejected both from the stomach and from the rectum. He died from exhaustion twenty-six days after the operation.

The post mortem diagnosis was as follows: chronic pulmonary tuberculosis; cancer of the œsophagus; acute diffuse peritonitis; senile atrophy of the kidneys; chronic pleurisy; cloudy swelling of kidneys and liver.

Three small, ragged tuberculous cavities were found at the apex of the right lung. It should have been stated above that a troublesome cough developed during the last few weeks of the patient's life. It was never severe enough to call for special treatment. At the autopsy it was found that the external wound communicated with the stomach, and also that a cavity had formed between the stomach and spleen and surrounding tissues. A certain amount of the food had evidently entered this cavity, thereby causing the pain. About half a pint of whitish opaque fluid was found in the peritoneal cavity. The peritoneum in the region of the liver was lined with an opaque white membrane. The surface of the stomach was of a diffuse red color, on the posterior and lower portion, the rest of the walls being dark green from post mortem changes. Glands somewhat enlarged.

The whole circumference of the œsophagus for two inches above the sternal notch was the seat of a rough, elevated, nodulated growth, having an irregular outline, and being fully an inch thick in one place. It was more especially developed on the posterior surface

of the canal. The microscope showed the growth to be composed of "reticulated connective tissue, with epithelial cells in spaces."

Did this man get sufficient relief to encourage us in repeating the operation under similar circumstances? I have no hesitation in saying that he did. It is fair to conclude that he lived as long and had less suffering by reason of the operation. The only alternative was hypodermic morphia, a rather poor substitute for food. The breaking down of adhesions between the stomach and parietes was probably unavoidable, on account of the great antero-posterior diameter of the abdominal cavity. If a patient with nearly complete occlusion of the oesophagus is so weak that he evidently has but a short time to live, it is doubtful if much benefit is to be derived from this operation. But, under opposite circumstances, if the person is able to be up and about, and has a prospect of some weeks or months of life, a very considerable relief to the gnawings of hunger, and its attendant restlessness, may be confidently expected from the procedure. Under these circumstances the operation is to be recommended, provided rectal feeding fails to accomplish the object.

HEART-FAILURE.¹

BY E. N. WHITTIER, M.D.,
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THE opinion, which prevails among the laity as well as in the profession, that during the winter of 1889-90, there has been a large increase in the number of deaths from "heart-failure," is certainly well grounded, for at no previous corresponding period in the experience of this generation have so many instances been observed and recorded, of inability on the part of the heart to perform its functions.

Deaths in Boston from Heart Failure and its Complications,
for a Period of Twelve Months ending December 31, 1888.

	Heart Failure.	With Complications.	Total.
January	2	3	5
February	..	..	..
March	1	..	1
April	1	..	1
May	..	2	2
June	1	..	1
July	1	..	1
August	..	2	2
September	..	1	1
October	1	1	2
November	5	3	8
December	..	6	6

Deaths from Heart Failure and its Complications, for a
Period of Fifteen Months ending March 31, 1890.

	Heart Failure.	With Complications.	Total.
January, 1889	6	1	7
February, "	2	1	3
March, "	..	3	3
April, "	5	3	8
May, "	2	2	4
June, "	..	4	4
July, "	3	2	5
August, "	4	3	7
September, "	6	..	6
October, "	6	8	14
November, "	5	10	15
December, "	8	4	12
January, 1890	10	24	34
February, "	5	12	17
March, "	5	7	12

¹ Read before the Suffolk District Medical Society, April 26, 1890.

Deaths from Heart Failure, Primary or Secondary, during
the Winter Months.

-1888-89.-		-1889-90.-	
Heart Failure.	With Complications.	Heart Failure.	With Complications.
November	5	3	5
December	..	6	8
January	6	1	10
February	2	1	5
	13	11	28
Total, 24.		Total, 78.	

[From the statistics of the Boston Board of Health, courtesy of Dr. Durgin, chairman.]

I offer this paper in examination of the contributing as well as of the underlying causes inducing the opinion thus formed.

The factors which combine and find expression in the opinion so widespread and so prevailing are

(1) An epidemic of large proportions, having special influence in the direction of cardiac exhaustion: primarily because the disease itself is essentially a disorder of the nervous apparatus, in which cardiac and thermo-toxic centres are extensively involved; secondarily, in that it has as a predominating complication, broncho-pneumonia.

(2) A season of the year in which pneumonia, as primary diseases, have always occupied prominent positions in the mortuary statistics, and all recognize the immediate and positive relation of acute pulmonary inflammation to cardiac failure.

(3) A higher and constantly increasing knowledge of the important position occupied by the myocardial disorders in the pathology of heart disease, and their high rank among the diseases which contribute to the death-rate; for it need not now be said, as Rny justly observed in 1883, "that the brilliant achievements in the diagnosis of valvular disease effected by means of auscultation, have led to some injurious neglect of the non-valvular diseases of the heart."

We are all familiar with the classical divisions, fatty degeneration, fatty infiltration and fibroid disease of the heart, but of late, changes in nomenclature have brought prominent to the front in the later writings, the terms arterio, capillary, fibrosis, defining peripheral changes; arterio sclerosis, defining changes in the larger arterial trunks, and myocardial sclerosis or arterial sclerosis of the heart expressive of the changes which take place in the muscular structure of the heart or in the inter-ventricular septum, a most important point to be borne in mind. I do not propose to discuss at any length the older and better known divisions, but rather to present some of the later views on the subject of the vascular changes which sustain a casual relation to sudden death.

Dr. McWilliam, in his admirable article on heart-failure, in the *British Medical Journal*, January, 1889, cites Ludwig, Hoffa and Kronecker, and presents a synopsis of their careful studies on the subject under consideration. I may further state that I do not deem it profitable to discuss on this occasion, as of primary importance, the influence on the duration of life of the gross lesions, wherein the physical signs are fairly well marked, but the more important of the causes of sudden death from cardiac failure wherein no large and appreciable lesion exists, ante-mortem.

Formerly, it was assumed that cardiac failure took place with greatest frequency in the midst of quiescent standstill in a state of diastole, but it is now just beginning to be considered more probable that sudden arrest