of a centimetre in diameter and a little darker than the surrounding brain; otherwise nothing in the brain to suggest a hemorrhage, and these I considered to be due to the plugging of the arteries. All the arteries of the brain were very atheromatous. The carotids as they entered the skull cavity were like pipe-stems, but contained no clots. The basilar artery was tortuous with thickened walls (in two places calcareous), and its lumen was filled for its entire length with a solid clot somewhat firmly adherent in places to the intima. The arteries of the fissure of Sylvius, the posterior communicating and the anterior cerebral also, contained clots. The anterior communicating were thickened and small, but did not contain clots.

The meninges were much congested, but there was no evidence of any exudation.

The arteries everywhere showed evidences of atheroma, even the pulmonary arteries.

The aorta contained many patches of atheroma, some with calcareous deposits in them.

At one place in the arch, just opposite the opening of the left carotid, there was a patch of atheroma, one and one-half centimetres in diameter, with an area of necrosis in the centre, all the layers being destroyed; there was no thrombus at this point.

The pericardial sac was obliterated.

Heart about normal in size — all the valves competent, and showed nothing abnormal.

Upon opening the left ventricle, its cavity was found to be nearly filled with a thrombus attached to the wall. Upon removing this thrombus (which was made up of stratified blood-clot), the heart muscle was found to be very thin over an area five centimetres in diameter, and for a space two centimetres in diameter the wall was made up simply of adherent layers of the pericardium, upon the ventricular side of which there was a calcareous deposit two millimetres thick. This calcareous matter extended in places into the thrombus.

The right coronary artery was atheromatous but patent. The left coronary artery was atheromatous, and plugged with clots which had become calcareous. These clots began about one centimetre from the opening of the artery into the aorta.

The lungs were dark in color, crepitant, floated in water. Upon cut section, much frothy fluid tinged with blood could be squeezed out. No evidence of any former tubercular trouble. The mucous membrane of all the bronchi was much congested and covered with mucus.

Stomach and intestines normal.

Pancreas filled with fat.

Kidneys normal in size, and capsule peeled off readily. Cortex slightly diminished; numerous depressions on the surface.

Liver of chronic passive congestion.

Bladder normal.

Spleen two and one-half times the normal size and quite firm.

Testicles normal, soft.

Scar, one centimetre long, about two centimetres above the outer part of right eyebrow, but no evidence of old fracture beneath. No other scars found. Dupuytren's contraction of fourth and fifth fingers of right hand and thumb of left.

Anatomical Diagnosis: general arterio-sclerosis, atrophy of brain, thrombosis of arteries of brain, thrombosis of coronary artery, parietal thrombosis of left ventricle, obliterating pericarditis, destruction of heart muscle, chronic splenitis, chronic passive congestion of liver, kidney of arterio-sclerosis.

Cause of death: primary arterio-sclerosis, immediate thrombosis of basilar artery and the coronary artery with parietal thrombus of heart.

Microscopical examination of a cut section of the basilar artery showed a great increase in the intima, with a loss of substance at one place, and to this "ulcer" the clot was adherent. The kidneys showed a slight increase of connective tissue, with thickening of the intima of the vessels.

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A CASE OF SYPHILIS OF THE HEART.[1]

BY FREDERICK COGGESHALL, M.D.

The case which I am about to report seemed to me and to the gentlemen who saw it with me one of great interest from the rarity of the lesion and the utter obscurity of the symptoms. I shall enter into full details as to the patient's previous history, because it was so misleading that it might well have led to a different diagnosis, and to a much more favorable prognosis than the result justified.

I was consulted last winter by a gentleman who complained of a dry, irritating cough, and of feelings of languor and exhaustion upon the slightest exertion, and nothing more.

He was a well-developed, well-nourished man of thirty-three, a teacher and writer by occupation, a fine athlete, and in the habit of practising difficult and exacting gymnastic feats. I had known him for four years, during which time he had always appeared to me to be in the best of health. He said he had not consulted a physician before for more than ten years. He had been accepted without hesitation by two conservative insurance companies within the past two years.

When a boy, he had had pneumonia twice, both times in the left lung, and had had scarlet fever with which he was very ill. Twelve or thirteen years ago he had been very wild, had occasionally abused alcohol, had smoked to great excess, had had gonorrheal arthritis twice. Twelve years ago he had a hard chancre, for which he was treated for three months, and from which he had never noticed the slightest symptom since. He had begun treatment before secondary symptoms appeared, as his physician was certain about the nature of the sore, and they had never manifested themselves.

Of late years, his life had been very different. He had been married nine years. (His wife had had one still-born, but no living child.) He had been a total abstainer for the last two years, and had only used alcohol occasionally for some years before. He smoked two or three cigars a week; but he afterward acknowledged that he chewed about four ounces of tobacco a week. Having a social position to maintain, he was naturally ashamed that he should be known to have such a filthy habit, and therefore he

[1] Read before the Clinical Section of the Suffolk District Medical Society, October 21, 1896.

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never expectorated, but kept a small piece of tobacco under his tongue, renewing it frequently, and swallowing all the juice; so that he got the full benefit of the nicotine.

He had been doing very hard intellectual work for the past ten years, and taking much violent exercise in the gymnasium. Had had one vacation of about three months, in all that time. He had had much business worry and domestic unhappiness, to drown the thoughts of which he had, for years, been in the habit of studying and writing late into the night, often not going to bed until nearly morning.

He was despondent about himself, having told several friends that he should not live long. I had been previously told by his friends that he said he had angina pectoris and heart disease, and that he expected to die of locomotor ataxia. He had often complained while exercising of severe paroxysms of pain in his left side. His father and another relative had committed suicide to escape, it was said, from the sufferings of locomotor ataxia. There was no phthisis in the family.

On being questioned as to his present condition, he said that he had not known what it was not to feel tired for a year past. Had felt feverish every evening for the past three weeks. Anorexia for the past month, with nausea at the sight of food, and vomiting within a few minutes after swallowing solid food. Had not tried for several weeks to take any nourishment except hot milk diluted one-half with water, which he was always able to retain, and, occasionally bread and beef-tea. Was not short of breath, but had severe pain throughout the left chest on exercising. Had not raised the least quantity of sputum with his cough and never felt as if there was anything to raise. Had lost some weight — he did not know how much — in the last six months. No night-sweats.

On examination, the temperature was found to be 101.5°; pulse 65, regular, and of perfectly normal quality in every way. The tongue was pale, flabby, clean. Mucous membranes pale. Right chest slightly hyper-resonant, otherwise normal. Left chest, respiratory and voice sounds seemed a little distant, percussion slightly less resonant than right throughout. On deep inspiration, which caused sharp pain in the left axillary and precordial regions, the left side of the chest expanded markedly less than the right. Heart's dulness extended almost to the nipple line. The apex could be most distinctly felt in the fifth interspace in the nipple line. Heart-sounds normal, except a slight roughening of the first sound, most distinctly heard to the left of the sternum in the third interspace. This was so slight, however, that I was not certain that there was anything abnormal. Urine, a very small quantity of which was obtained while he was in my office, contained a faint trace of albumin; specific gravity, by beads, between 1.015 to 1.020.

He was asked to return in a few days, and to bring, if possible, some sputum and enough urine for complete examination. Meanwhile he was given treatment for the stomach and a sedative for the cough, but told that rest and change of habits as to work and exercise were of vastly more importance. He did not return. I was in the habit of meeting him frequently, and from such opportunities for informal questioning, I was able to learn that the cough was better through the day but getting worse than ever at night, that his digestion was improving, that he could get no sputum, could never remember to save the urine, and that for the present he could not stop work. He seemed very despondent about himself, and at the same time too indifferent to try to follow advice.

Soon after his visit to me he made a hurried journey to a distant State in very cold weather, to attend some teachers' meeting; was very much exhausted, and felt that he "had caught cold." Cough was worse, but still perfectly dry. Stomach became worse than ever. I learned afterward, that about this time he was seized with a severe pain in the precordial region after performing a difficult gymnastic feat. He became speechless for a few minutes and almost pulseless, according to the bystanders. He soon recovered, however, sufficiently to walk home leaning upon the arm of a friend. He said he had not lost consciousness. He was not seen by any physician at this time. Some days after, he was seized with vomiting in the street while walking home after an evening spent in violent exercise in the gymnasium.

About three weeks after his visit to me, he found himself feeling so weak and ill that he at last consented to stay at home until he felt better. After he had been confined to the house for two days, his illness suddenly assumed a new form. He was asleep upon a couch about three in the afternoon, with no one but his wife in the room, when, according to her account, for he could remember nothing, he suddenly started up in a kind of convulsion and fell upon the floor unconscious. He was pulseless at the wrist, and was thought to be dead. The nearest doctor was called, a homeopath, who worked over him for several hours before consciousness, or at least intelligence, returned. During this time the pulse was said to have been very slow. Toward evening he recovered, and described himself as feeling comfortable except that he was very much exhausted. He slept well that night, and got up the next morning saying that he felt better than he had felt for months. He took a bath, dressed, walked about the house, ate a little breakfast, and smoked a cigar.

About two P. M. that day, which was Saturday, he was again upon the lounge, when he fell into another convulsion like that of the day before. The same doctor was called. The patient became conscious after some time, and asked that I should be sent for. I was, however, out of town, and Dr. C. P. Putnam was called; but he could not be found for several hours. Meanwhile, the doctor present sent for another homeopath in consultation, and they stayed with the patient until I arrived about eight P. M. They told me that the condition in which I found him was practically the same in which they had first seen him, except that he was now perfectly conscious. Their treatment had been most unhomeopathic — doses of brandy, nitroglycerin, and tincture of digitalis, administered hypodermically. Dr. Putnam came in before I had completed my first hasty examination of the patient, and we went over him together.

The patient was lying, half-undressed, upon his back on a couch. Face pale and somewhat cyanotic. Respiration 42 to a minute. Pulse irregular, very compressible, 15 to 20 to the minute. Apex could not be felt. Cardiac dulness extended to the nipple line. A loud murmur was heard all over the cardiac area, but most distinctly at the base to right of sternum, replacing both sounds as well as I could describe it, and resembling nothing I had ever heard before. It gave

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me the impression of a large foreign body obstructing the current. Dr. Putnam described it as though the blood was flowing through a mesh-work of wires. Temperature 97.4°. Patient was perfectly conscious and intelligent, but too weak to speak much above a whisper; complained of pain, as of "a great weight pressing on his heart."

I remained with him throughout the night, expecting death to occur at any moment.

During the next twelve hours after I took charge of the case, its history was as follows: The pain soon disappeared and the patient was comfortable, except for nausea at times and for difficulty in "getting air enough," as he expressed it. He was perfectly rational and conversed in a feeble voice; was wide awake. At intervals of from twenty minutes to an hour, he had a slight tonic convulsion, sometimes assuming a position of slight opisthotonus, but generally raising himself partially up, the hands clenched, the eyes fixed and staring. He sometimes ground his teeth, but did not froth at the mouth. There was no clonic spasm of the extremities, nor twitching of the face. This would last from one to three minutes, when he would fall back apparently dead. After receiving a hypodermic of strychnine nitrate (one-fifteenth of a grain), one-tenth of a grain of nitroglycerin in solution dropped on the tongue, and an enema of an ounce of brandy in water, he would wake up as if from sleep, and remain perfectly rational until the next attack. How much the stimulation had to do with causing or hastening his revival after one of these attacks I hardly knew; but I continued it as there seemed nothing else to be done. Just before one of the convulsions his pulse would fall to 15 or 16 a minute, and for a short time after renewed stimulation it often rose to 24; most of the time it was 18 to 20. There were pretty distinct Cheyne-Stokes respiration in short cycles lasting about a minute, 40 breaths; and there was a curious correspondence in the heart's action. During the quarter-minute in which the respirations were most energetic, there was one heart-beat, preceded and followed by an interval of seven to eight seconds, in which nothing could be heard over the heart with the stethoscope. The remaining beats were pretty regularly distributed through the remaining three-quarters of the minute. He vomited frequently small quantities of a substance resembling thin dark soup. He had taken no food since morning. He passed urine involuntarily during one of the convulsions, but very little. Toward morning when an attempt was made to obtain a specimen for examination by catheter, the bladder was empty. The pulse gradually improved in quality during the night, and the patient said he felt much better.

At eight o'clock Sunday morning, a specimen of urine was passed voluntarily and given to Dr. J. N. Coolidge for examination. His report was as follows:

"Color high, specific gravity 1.024, acid reaction, sediment considerable, urophein +, indican +, urea 1.26 per cent., chlorine normal, earthy phosphates normal, alkaline phosphates none, albumin one-eighth per cent. Bile pigments and sugar absent. Sediment: occasional squamous cells, numerous small round cells and leucocytes, numerous blood globules, many hyaline and finely granular casts — small, medium, and large, with epithelium and blood adherent."

By this time the patient seemed strong enough to bear removal to a bed in the next room. The temperature was 98.2°, pulse varying from 20 to 25. There was no convulsion after seven A. M. Sunday until about five A. M. Monday. He was seen in consultation by Dr. Fitz on Sunday afternoon, and I asked Dr. Putnam to see him again, which he did late that afternoon. He thought him distinctly better. The vomiting had stopped. He was given enemata of brandy and peptonized milk every four hours, which he retained without difficulty, but still felt so nauseated at the idea of food that nothing was given by the mouth except a little matzoon, which he relished and retained. He slept about four hours during Sunday night.

Monday morning he had a slight convulsion about five, as I have said; no more throughout that day. There was a normal movement of the bowels. Respiration 30 to 35, pulse varying from 18 to 30. Most of the time about 20, of good strength. The character of the murmur had become by Sunday, and continued from that time, more like an ordinary hemic murmur.

Tuesday, after a good night, felt fairly comfortable. Pulse from 20 to 30; respirations about 30. Took a good deal of matzoon, and enjoyed it. Nutrient enemata and nitroglycerin were continued. No convulsions.

Wednesday morning, after a restless night, there was a slight convulsion at about four A. M., no change after it. About ten A. M. a severe convulsion, followed by unconsciousness for a quarter of an hour. Another slight convulsion at eleven; a pretty severe one at two P. M. In all of these urine and feces were passed involuntarily. There was no voluntary action of bowels or bladder this day. He seemed stronger, however, and felt stronger between the attacks. There was no vomiting. Pulse from 20 to 24, sometimes as high as 30. Temperature normal. At six P. M. he had a very violent convulsion, the worst he had had. He struggled, and had to be held to keep him from falling out of bed. This lasted nearly ten minutes. When he regained consciousness his pulse was better than at any time previously, 40 to the minute for some time. When this convulsion occurred, I was, for the first time since the beginning of his illness, not within easy reach, and Dr. Fitz was sent for. I arrived before Dr. Fitz had left, and we agreed, I think, that the patient was much stronger and the action of his heart distinctly better than when we saw him together on Sunday. After this he was bright, and talked a good deal about indifferent subjects. He dropped asleep about nine P. M. after taking some matzoon. At ten he awoke quietly, turned over on his side, had a very slight convulsion and died without speaking.

The autopsy was performed the next day by Dr. Whitney in the presence of Dr. Putnam and myself. The lesions found in the heart were subsequently shown to be syphilitic. Dr. Whitney has kindly consented to give the pathological report of the case.

In conclusion, I have only to say that I must confess that I did not make a diagnosis, when I first saw the patient on Saturday night.

I was strongly impressed with the idea that there was probably a large ante-mortem thrombosis in the right ventricle, and expressed the opinion that death was imminent. As the time wore on and the patient did not die, and even seemed to be gaining a little, I

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ceased to have any opinion on the subject. At the consultation, an intercranial lesion of some kind, uremic poisoning and syphilis were only mentioned to be put aside for what seemed good reasons. There was little to make out a clear proof of syphilitic infection, and the symptoms did not resemble those of the best-known cases of cardiac gummæ. On the other hand, there was everything in the patient's past history to point to the possibility of a complete nervous break-down; and the idea of neurotic bradycardia, with its more cheerful prognosis, seemed confirmed by the obvious improvement in the patient's condition in many respects. The only thing, however, about which any one could feel certain was that the convulsions were of the character of so-called cardiac epilepsy, due to the cerebral anemia which was caused by the bradycardia.

Clinical Department.

TWO CASES OF CARCINOMA OF THE BREAST IN YOUNG ADULTS.

BY JOHN B. SHOBER, M.D., PHILADELPHIA,
Surgeon to the Howard Hospital and Assistant Surgeon to the Gynecean Hospital.

THE serious importance of all tumors of the breast, and the advisability of early operative procedure when malignancy is even suspected, have been so frequently insisted upon in recent literature that every case of mammary tumor demands our careful study and most earnest consideration.

There is a widespread belief that carcinoma rarely occurs under the thirty-fifth year, and that if a tumor develops before this period, say in the twenties, it cannot be malignant. The writer has seen three cases where mistaken diagnosis, based upon this consideration, have resulted most unfortunately for the patients; extensive mutilating operations being subsequently required with recurrence in two of them.

The age of the cases about to be described and the sex of one of them make them interesting and worthy of record.

CASE I. H. T., *male*, age twenty-three, a laborer. He was apparently in robust health, of good muscular development, and had had no previous illness. There was no history of tuberculosis or carcinoma in his family. He had been suffering for about six weeks with a painful affection of the right nipple. The pain was not constant, but at times it was very sharp and lancinating. A distinct lump or induration, about a half-inch in diameter, was felt immediately beneath and slightly adherent to the nipple. It moved freely over the deep fascia. Pressure caused pain and a discharge of a small quantity of lacteal fluid.

During the next four weeks the case was treated expectantly by applications of ichthyol, belladonna and iodoform ointments. No improvement having taken place, the breast was removed by operation.

The tumor was disc-shaped, one-half an inch in diameter, white and hard. The microscope showed certain portions of the tumor to consist of hyperplasia of fully formed connective tissue with dilated and tortuous milk ducts. Other sections of the tumor presented the appearance of true glandular carcinoma, consisting of nests of closely packed epithelial cells, surmounted by masses of fibrous connective tissue. The adjacent lymphatic glands showed no carcinomatous infiltration.

This case made an uneventful recovery, and has had no recurrence. It has been eight months since the operation.

CASE II. The second case is that of a female, age twenty-four, single. She was fairly well nourished, but had always been delicate. Menses began in her eighteenth year; always scanty, irregular and delayed. She had never had a serious illness, but her family history was bad. Her mother died of carcinoma of the uterus; two maternal aunts had carcinoma of the breast, and died before they were forty. Her father lived until he was sixty-seven; but when he was sixty his thumb was amputated for a growth which was said to be epithelioma.

One year before the patient came under observation she was struck violently upon the left breast. A month or so later she noticed a small lump developing at the seat of injury. It increased slowly but steadily in size, was painful only on pressure, and caused her little if any physical annoyance. The knowledge, however, of the tendency to cancer in her family worried her considerably, so that she presented herself quite prepared and anxious for an operation.

The tumor was situated in the upper portion of the breast. It was about the size of an English walnut, slightly adherent to the overlying tissues, but freely movable over the deep fascia and laterally. It was round, hard, and seemed to be encapsulated. There was no perceptible enlargement of the axillary or adjacent lymphatic glands. The operation consisted of removal of the entire mammary gland. It seemed quite unnecessary to remove the pectoral muscles or to attack the axilla. The wound healed by first intention, and there has been no recurrence in ten months.

The pathological report is as follows:

There is very marked proliferation of connective tissue between the glandular acini, almost sufficient to justify the opinion of intercanalicular fibroma. As far as the epithelial elements are concerned, there is found to be an extensive proliferation of the cells of the acini, giving rise to solid nests in places and to accumulations at the ends of acini in other places, and in many situations a marked tendency to break through the basement membrane and proliferate outside. These features of the tumor suffice to characterize it as a carcinoma, probably combined with fibromatous change.

The case illustrates the advantage of early diagnosis and prompt operation. The growth seemed to be purely local and confined. It is impossible to say how soon the adjacent lymphatic structures might have become involved. Once involved, the modern radical operation with ablation of the pectoral muscles and thorough clearing out of the axillary space would have become imperative.

PIGEON CALLS. — Dr. Harrey, a Scotch physician, is said to make a practice of leaving with such patients as are likely to require his prompt attendance one or more carrier pigeons to be dispatched with messages. He also takes the winged messengers with him on his rounds and sends them back to his office with prescriptions to be filled. It is not stated whether or not they carry back the medicine to the sufferer. — *Medical Record.*

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