A clinical lecture on exophthalmic goître (Graves's or Basedow's disease) / by James K. Crook.

great majority of cases suppuration, either abscess or pylephlebitis. Here in a woman the onset with pains and the early chills suggest, even in the absence of jaundice, that the whole trouble may depend upon gallstones, and that the chills may be associated with suppurative cholangeitis.

Chills and fever may, however, occur in cancer of the liver, and in this case the emaciation, the enlargement of the organ, and particularly the nodular masses, suggest the presence of a neoplasm. The chills and fever may be associated with the rapid growth of cancer, but in the liver the suppuration may be in some of the large bile ducts, blocked with the neoplasm. Dr. Norris wrote that subsequently jaundice developed. The fever persisted, and before her death the emaciation was extreme.

Case XXXIII. *Large Nodular Tumors at the Edge and Surface of the Liver.*—Mrs. S., aged about fifty years, consulted me January 24th, complaining of cough, loss of flesh, fever, and shortness of breath on exertion. There was slightly deficient expansion at the left apex, and a few râles in the suprascapular region. An examination of the sputum showed tubercle bacilli. I did not see the patient again until October 18th in consultation with Dr. Aaronsohn. She had had pleurisy on the left side, with some effusion, which had almost completely disappeared. She had become progressively weaker; had had some loss of appetite, but no marked gastric symptoms. On examination of the abdomen, however, there was felt a remarkable ridgelike tumor extending just below the level of the navel, with a very hard, everted, and irregular edge, above which was a sort of shallow groove. The abdomen was much relaxed and the intestines lay between the abdominal wall and this ridgelike mass. At first I thought it possibly might be the omentum curled up and indurated, but on more careful palpation it was evident that the indurated, irregular edge was continuous with the liver. The extreme hardness and irregularity were, of course, very suggestive of cancer, in favor of which also were the enlargement and the pain on pressure.

I saw this patient again in consultation on the 30th and 31st, and the two weeks which had elapsed had made a very striking change in the condition of the liver. It was considerably below the level of the navel. The irregularity was very much more pronounced, and definite nodular masses could be felt both at the edge and on the surface. One of these, a little to the left of the middle line, was at least six centimetres in diameter, with a rounded edge and a depressed center. The condition was still a little peculiar and unusual from the fact that the abdominal walls were extremely relaxed and the intestines lay in front of the liver, so that there was resonance as high as the costal margin. The growths in the liver were, from their local character, evidently secondary, and though the patient had profound anorexia, there was no evidence as to the seat of the primary disease. She died a few days after my last visit.

Case XXXIV.—*Enlargement of the Liver; Prominent Mass in the Upper Umbilical Region; Latent Cancer of the Stomach.*—Henry T., aged fifty-nine years, admitted October 4th, complaining of pain in the abdomen and back. Family history is good.

Has been a temperate man and has had no serious illnesses. Three months ago he says he was quite well. About eight weeks ago noticed that he had occasional pain in the abdomen, which for the past four weeks has been constant and of a dull aching character. He only stopped work three weeks ago; has lost, he says, thirty pounds in weight in two months. His appetite is poor; has never had any vomiting; has no nausea. Food makes no difference in the pain. Two days ago his feet began to swell.

Patient is a tall man, much emaciated. The skin has everywhere a sallow tint, and the conjunctivæ are slightly tinged. Tongue moist, covered with a white fur. Condition of thoracic organs is negative. Abdomen much distended in epigastric and hypochondriac regions, especially on the right side. In the upper part of the umbilical region there is a prominent mass which is to be seen readily, and which moves up and down with respiration. On palpation, it is felt to be separated by a distinct groove from the swelling in the right hypochondriac and epigastric regions. The surface is smooth, painless; no nodules are to be felt, but on the lower margin which extends to the navel it is distinctly irregular. The percussion dullness does not correspond to the edge of the mass, but is fully a hand's breadth above it. The upper limit of dullness is at the fifth rib in the nipple line, and at the seventh in the midaxillary. The splenic dullness is not increased; the edge is not palpable.

The urine was dark brownish-yellow and contained a faint trace of albumin.

There seemed no question at all that this was a liver enlarged by cancer, but at first the prominent mass in the umbilical region, which seemed separated from the upper part by a distinct groove, raised a slight doubt; but the profound cachexia, the rapid growth, and the irregular, nodular edge seemed conclusive. The primary trouble was not evident. The examination of the rectum was negative. A test breakfast, withdrawn fifty minutes after, gave fifty cubic centimetres of a dirty reddish-brown fluid consisting of undigested food, and showed a great many blood-cells. Free hydrochloric acid was not present. On the 10th he had been suffering a great deal of pain, and following three injections of a sixth of a grain of morphine at 9 A. M., 3 P. M., and 10 P. M., he became profoundly comatose, and died at 2 A. M. on the 11th.

The autopsy showed the primary carcinoma to be in the stomach, at the greater curvature, just eight centimetres from the cardiac orifice. The liver was enormously enlarged and weighed five kilogrammes and a half. The prominent tumor in the upper umbilical region felt during life corresponded to a new growth in the left lobe of the liver, which formed a projecting knob ten by ten centimetres in extent. The entire organ was occupied with small and large secondary nodules, very little liver substance remaining. The bile ducts were not affected. There were secondary nodules of cancer in the pancreas.

The following case is of great interest from the local character of the tumor masses, which in the epigastric region were so prominent, soft, and fluctuating that the condition of abscess of the liver was suspected. It illustrates, too, the importance of obtaining a thorough history.

Case XXXV. *Sarcoma of the Liver; Two Prominent Tumor Masses in the Epigastric Region; Diagnosis of Abscess; Exploratory Laparotomy.*—E. K., aged nineteen years, seen September 6, 1892, with Dr. McGill. Condition on visit was as follows: The most extreme grade of emaciation, particularly of the face. The skin was bathed in perspiration; pulse, 104, of fair volume and good tension; respirations quiet; no fever.

On exposing the abdomen, the upper zone is distinctly full, and two tumor masses are visible in the middle line, the smaller and less prominent just below the ensiform, and the other, a larger hemispherical mass, bulges the thin, tense skin between the ensiform cartilage and the navel. Both rose and fell with the respiratory movements. No glandular enlargements were visible.

On palpation, the superficial tumor masses were not tender,

nor were there any spots of special sensitiveness anywhere over the liver. The lower and larger mass was soft and appeared to be distinctly fluctuating. The upper tumor was not quite so soft, and fluctuation could not be obtained between the two. The apparent fluctuation was also recognized by Dr. Tiffany, who had seen the patient some days before. A distinct ridge, like the edge of the liver, could be felt two fingers' breadth above the navel and extended to the right, passing at the anterior axillary line beneath the costal margin, at which point there was a somewhat indistinct irregularity.

The liver dullness began on the midsternum opposite the sixth costal cartilage, and extended within two fingers' breadth of the navel. In the midaxillary line it was at the eighth rib and the dullness was not increased at the right infrascapular region.

The condition of the heart and lungs was negative. The digestion was good and he had been taking plenty of nourishment. Lately he had had occasional attacks of diarrhœa.

The history of the case was not very satisfactory. He had been a fairly healthy lad, but had some indefinite illness this summer, and had gone out to Colorado with a friend. He was there on a ranch, and seemed to be fairly well until about six weeks ago, though he had apparently been losing in weight. He became much worse after a long ride, and about three weeks ago his father was summoned and immediately went to Colorado and brought him home. Since his return the chief symptoms have been progressive weakness and loss of flesh. The liver was found to be enlarged, and the tumor masses above referred to have within the past ten days become very prominent. There have been no definite chills, though he has occasional chilly feelings. The temperature has on no occasion been elevated and not infrequently been subnormal. He has had heavy sweats, particularly during sleep. No history could be obtained of any attack like dysentery, though he has had looseness of the bowels from time to time.

The first glance at the emaciated form of the patient at once suggested a new growth, but the age, the quick onset, and more particularly the examination of the superficial tumor masses and their rapid increase in size, seemed to favor the existence of abscess. Suppurating hydatid tumor could not be definitely excluded, though the rapid course was against this idea; also the profound emaciation which, though rare, is occasionally present, as in the case of an Italian who came under my observation in Montreal.* I suggested the propriety of aspiration or of an exploratory incision, and this the next day Dr. Tiffany proceeded to do. I then learned for the first time that in May, 1891, more than eighteen months ago, the lad had had disease of one testis, which had been removed, and Dr. McGill states that on section it seemed to be in a sloughing condition. He had, however, bruised himself on his bicycle. This fact was of very special importance in the history of the case, as it seemed most likely that the liver condition was associated with the disease of the testis, and from the length of time which had elapsed since the removal of the organ it rather favored the idea that the condition was neoplasm. I must say, however, that the physical examination of the two tumor masses in the epigastrium led us all to expect fluid, and I should unhesitatingly have put in an aspirating needle with the expectation of withdrawing either pus or a clear fluid.

Dr. Tiffany made an incision four inches in length over the lower tumor and exposed a large hemispherical swelling in the left lobe of the liver. There were no adhesions; the superficial substance had a natural reddish-brown color, and puncture with the hypodermic needle withdrew nothing but blood. Dr. Tiffany inserted his fingers and examined the upper mass, which was a second soft enlargement, and on the under surface of the liver there were several others, leaving no question that there was a multiple new growth in the organ. The patient was extremely weak after the operation, but rallied for a few days.

In this case, as in one or two others which I can call to mind, I have been led astray by the deceptive, semi-fluctuating character of liver tumors.

Primary new growths in the liver in young men are, of course, extremely rare, and, taking all the circumstances of the case into account, it is more rational to suppose that the lad had a new growth in the testis, which was bruised by the bicycle, and it was this in an inflamed condition which Dr. McGill removed in May, 1891.

The presence of tumor masses on the liver is, then, one of the most distinctive features of cancer of the organ, more particularly of the secondary form, which constitutes so large a proportion of all cases. The primary lesion is to be looked for in the stomach, intestines, urogenital organs, or the breast. The new growths are scattered diffusely with large nodular masses on the surface or at the edge. The rounded margin and cup-shaped depression are pathognomonic of these secondary cancerous nodules. The irregular syphilitic liver could alone be confounded with it, but in this condition there is rarely progressive enlargement of the organ, and the general features of the case are those of cirrhosis of the liver.

Tumor masses, as a rule, are absent in the primary cancer of the organ and in the form known as cancer with cirrhosis, in both of which conditions the organ may be of normal size, or even somewhat reduced. Lastly, large, rapidly growing encephaloid or sarcomatous growths may, as in Case XXXV, produce prominent tumors evident beneath the skin in the epigastric region, and which may apparently fluctuate, due either to the very soft nature of the neoplasm, or in some instances to hæmorrhage.

* *American Journal of the Medical Sciences*, October, 1882.

A CLINICAL LECTURE ON EXOPHTHALMIC GOÎTRE (GRAVES'S OR BASEDOW'S DISEASE).

By JAMES K. CROOK, M. A., M. D.,

INSTRUCTOR IN CLINICAL MEDICINE
AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL;
PHYSICIAN TO THE OUTDOOR DEPARTMENT OF BELLEVUE HOSPITAL.

Gentlemen: We have this morning a patient whose case presents the well-marked features of a somewhat remarkable and not very common form of disease. The patient is M. R., unmarried, aged twenty-two years. She has no employment, but lives at home with her parents. She comes to us to-day to be treated for a cardiac affection which, we are informed, has troubled her for five or six years past. Palpitation and painful action of the heart are of every-day occurrence, and are increased by even moderate exercise or exertion. The patient also suffers from muscular weakness, a capricious appetite, and general debility. The trouble is not so severe as to keep her in bed, but she never feels as well as other girls. In reply to a question she states that she sweats considerably, but much more on one

side of the face than on the other. An inspection of the patient's face reveals several facts of importance. She has a very anæmic aspect, the face and prolabia being bloodless; at the same time the skin is very dark—many shades darker than that of her mother who sits by her side. We are informed, however, that her father was a very dark-skinned man, which fact may account for our patient's peculiar complexion. Another feature of more interest is the singular appearance of the eyes. An unnaturally large area of the tunica albuginea is exposed, giving the patient a wild, staring appearance. A close inspection shows that the balls of the eyes protrude abnormally from the orbits, so much so as to cause some stretching of the lids in order to close them. You will also observe a defective co-ordination between the movements of the eyeballs and those of the lids. When the patient looks down or up, the lids do not closely follow the movements of the globes, but are raised or depressed one at a time and in a faltering or hesitating manner. The constant stretching of the lids is no doubt responsible for the well-defined œdematous line which you will notice along their margins. Gentle pressure over the closed eye is sufficient to restore the globe to its natural position, but removal of the pressure is at once followed by renewed protrusion. The sight is not affected, but the eyes tire very quickly. The patient states that she went to a dispensary to be treated for weak eyes about four years ago. The doctor gave her some drops to put into them, and soon after her friends began to notice their undue prominence. The oculist must therefore, in the opinion of the patient and her friends, shoulder the responsibility for this condition, which is about as reasonable as many other accusations laid at the doctor's door. A casual inspection of the patient's neck would give you the idea of simple local fatness, but a closer examination will show you that this appearance is confined to the region of the thyreoid gland. We find that both lobes of this body are very materially and uniformly enlarged. The body is quite soft and pulsation may be noticed in it. This enlargement, we are informed, commenced some time after the heart symptoms appeared. Its growth was very slow and was hardly noticed for several years. The patient does not think it is enlarging at all lately. We find the pulse beating at the rate of 98 per minute. It is rather weak and vibratile, and a brisk walk around the amphitheater raises it to 130 a minute. There are no signs of organic heart disease, but a remittent, humming sound is heard over the right internal jugular vein, just above the sterno-clavicular articulation.

Among these subjective and objective symptomatic features there are three which point to a rational diagnosis of the case—viz., the exophthalmia or protrusion of the eyes, the thyreoid enlargement, and the quick heart. This clinical triad embraces the chief pathognomonic phenomena of a peculiar affection which has received the name of exophthalmic goitre, after the two more prominent features. It is otherwise known as Graves's disease among English, French, and American writers, after Dr. Graves, who wrote the first succinct account of the disease as an individual affection in 1835; and as Basedow's disease among the Germans, after Professor Basedow, whose classical description appeared in 1840. These features are all very well marked in this young girl, and we need feel no doubt as to the identity of the affection. As corroborative symptoms we have the appearances of anæmia and also of hemidrosis (unilateral sweating). The exact pathology of this disease is still open to doubt, but it is believed to involve the vaso-motor and sympathetic nervous systems. In a few instances where autopsical examinations have been possible the cervical sympathetic nerves have shown morbid appearances, but in the majority of cases they were found to be unaffected. The affection does not seem to involve structural lesions, and may therefore be properly classed as a neurosis. The protuberance of the eyeballs may be partially due to an increase in the post orbital adipose and areolar tissue, but it is probably to a much greater extent caused by an enlargement of the blood-vessels in this locality. Vascular engorgement is also responsible for the thyreoid enlargement, supplemented later along by hypertrophy of the fibroid structure of the gland. No satisfactory reason has been assigned for the increased frequency of the heart's action. The anæmia, emaciation, and muscular weakness which are usually present may in some cases be responsible for this symptom, but cases occur in which these concomitants are absent. The disease occurs with vastly greater frequency in the female sex, probably in the proportion of 3 or 4 to 1, and is almost invariably found between the twentieth and fortieth years of life. Depressing emotions, fright, worry, and nerve shock have been supposed to have some influence in the causation, and heredity has also seemed to play a part in certain cases. Beyond this, speculations as to the ætiology are valueless, as we have no adequate data in the present state of our knowledge for determining the exact causation. With reference to the prognosis it may be said that the disease possesses no intrinsic tendency to destroy life, but it augments the danger of intercurrent affections. This young girl could hardly withstand an attack of pneumonia or typhoid fever, for example, as well as if she were free from Graves's disease.

Exophthalmic goitre. Photograph by Mr. J. M. Dixon.

The affection is essentially chronic and extends over a long period of time. This patient, according to her history, has already suffered six years from it. A few patients are eventually worn out and die from exhaustion, while others succumb to dilatation and enlargement of the heart, due to the constant acceleration. Still others, probably twenty-five or thirty per cent., overcome the debilitating effects of the disease and eventually recover. In a small proportion of the recoveries the exophthalmia may remain permanent, owing to paresis of the recti muscles from constant overstretching. Some enlargement of the thyreoid also occasionally persists, but in a majority of those who get well all traces of the disease disappear. Our

present patient has certain indications in her favor—viz., a fair appetite and digestion and only a moderate degree of cachexia; nor is the heart's action excessively accelerated. In the therapeutics of exophthalmic goitre we have no pathological entity to combat, hence there are no specifics for the affection. The treatment, therefore, resolves itself to a great extent into the management of the indications as they appear. In the case of this young girl the cardiac palpitation and the anæmia require immediate attention. The patient should be placed under the best attainable hygienic conditions. She should receive a bland and unstimulating but nutritious diet. Such articles as milk, meat juice, and soups should enter largely into the daily regimen, although solid food may be partaken of with proper avoidance of the danger of upsetting the weakened digestive power. Everything should be done to avoid depressing emotions and to preserve a cheerful frame of mind. Alcohol, tea, and coffee should be used sparingly if at all. The patient need not be confined to bed, but a considerable part of each day should be passed in an easy chair, or in a position requiring little muscular exertion, although a short time may be spent outdoors daily when the weather is agreeable. For the persistently painful heart's action in this case I would recommend a prescription composed as follows: ℞ Tinct. aconit. rad., nitroglycerin (cent. sol.), āā ♏j; ext. cacti grandiflor. (P. D. & Co.), ♏x; aquæ dest., q. s. ad f ℥ j. One dose to be taken three times daily—on rising, at noon, and at bedtime. For the anæmia I would advise a five-grain Blaud pill combined with a grain of quinine to be taken after each meal. One drachm of pure cod-liver oil may be taken at the same time if well borne. A soft, nicely fitting bandage applied over the eyes at bedtime will promote the patient's comfort during the night, and relieve the tension of the eyelids. It is said that such a bandage applied snugly to the neck will facilitate the diminution of the thyreoid enlargement, but I have had no personal experience in this direction. The use of the galvanic current has the sanction of a number of eminent authorities in the treatment of this disease, but its use must be persisted in for a long time in order to be of benefit.* A daily bath would probably be of advantage in this case, given after the method of Jaccoud. The water should be quite warm at first and gradually lowered with each succeeding bath until it is as cold as can be borne without shock. The baths should not be of more than twenty-five or thirty seconds' duration.

The Shadow Test.—A course of lectures, demonstrations, and clinical work on skiascopy, or the shadow test, will be given at the Philadelphia Polyclinic during the week beginning April 9th. This method of determining the refraction of the eye has for years been practiced as a part of the regular routine examination in that institution, and is there thought to be of greater practical value than the methods by the use of the ophthalmoscope or the ophthalmometer.

* An elaborate paper on the electrical treatment of Graves's disease will be found in the *Lancet*, July 4 and 11, 1891. Mr. Cardew, the author, uses a weak continuous galvanic current (two to three milliampères), and has it applied for six minutes three times a day.

Original Communications.

THE TREATMENT OF DEVIATIONS OF THE NASAL SÆPTUM.*

By JOHN O. ROE, M. D.,
ROCHESTER, N. Y.

The predisposing and exciting cause of many chronic diseases of the air-passages is nasal obstruction, which results perhaps as often from deviations and excrescences of the nasal sæptum as from any other conditions. The frequency with which deviations occur is very great; in fact, they are so often found that Stoker† says he doubts if such a thing as a perfectly straight sæptum exists. The following statistics give some idea of the frequency of deviations of the sæptum:

Zuckerkandl‡ found deviations in 37·8 per cent.—140 in 370 cases observed by him; Delavan,* in fifty per cent.; M. Mackenzie,‖ in 76·9 per cent.—1,657 in 2,152 cases; Jarvis,△ in eighty-one per cent.—81 in 100 cases; Sedziak,◊ in 83·5 per cent.—167 in 200 cases; Simanovsky,‡ in ninety-five per cent.—925 in 974 cases; P. Heymann,‡ in 96·4 per cent.—241 in 250 cases; Von Klein,‡ in ninety-eight per cent.

Nearly all statistics collected upon this subject are defective since they fail to specify the location of the deflection. It is a fact, however, that two thirds of all cases of deviation are confined to the cartilaginous and to the anterior portion of the osseous part of the sæptum. This is illustrated in the statistics just cited. Zuckerkandl's observations were made from dry skulls in which he found but 37·8 per cent. of deviations, indicating that in these cases the deviation was confined to the osseous portion, whereas in observations made entirely upon the living subject, in which the cartilaginous portion is present, the percentages reach from fifty to ninety-eight.

Classification.—Various attempts at classification have been made in regard to the form of the deviations, and nearly every writer on this subject has a classification of his own. Thus Loewenberg** divides them, according to their situation and direction, into superior, inferior, horizontal, and vertical deviations; Jarvis,†† into osseous, cartilaginous, and osseo-cartilaginous; Sedziak,‡‡ into simple deviations to the right or left, and deviations with partial

* Read before the American Laryngological Association at its fifteenth annual congress.

† *Deviations of the Nasal Septum*, London, 1888, p. 1.

‡ *Anatomie der Nasenhöhle*, erstes Bd., S. 102, zweite Auflage, 1893.

= *Transactions of the American Laryngological Association*, 1887. New York, 1888, vol. ix, p. 202.

‖ *Diseases of the Throat and Nose*, vol. ii, p. 433.

△ *New York Medical Journal*, 1888, vol. xlviii, p. 13.

◊ *Journal of Laryngology and Rhinology*, 1891, vol. v, p. 85.

‡ *Vratch*, vol. xi, 1890, No. 37.

‡ *Berliner klin. Woch.*, 1886, Bd. xxiii, S. 329.

‡ *Times and Register*, 1889, vol. xx, p. 699.

** *Zeitschrift für Ohrenheilkunde*, Wiesbaden, 1883, Bd. xiii, S. 1.

†† *Loc. cit.*

‡‡ *Journal of Laryngology and Rhinology*, vol. v, 1891, p. 89.