react particularly to toxins, and these peculiarities may be hereditary.

The degenerative changes in the thyroid, adrenal, and other ductless glands, the heart and blood vessels, the nervous system, the eyes, ears, kidneys, liver, pancreas, uterus, ovaries, testes, prostate, breast, fat, skin, hair, lymphatic tissue of the naso-pharynx, and the gums and teeth—these two last being the most frequent and conspicuous of all—I have frequently described in detail, and I have shown how liable are certain of these degenerated organs—as the breast, uterus, ovary, and pancreas—to be infected with cancer. Among the nervous symptoms may be mentioned intense headache, neuritis, neuralgia, sleeplessness, misery, complete mental and physical prostration, melancholia, epilepsy, disseminated sclerosis, delusions, paralysis agitans, dementia praecox, etc.

Besides these changes which are the direct result of the supply of toxic blood to the tissues, we have a number of infections by organisms which occur because of the inability of the degenerated tissues to withstand their inroad. These infections are not able to obtain a foothold in a normal healthy subject.

Perhaps the most conspicuous at the present moment is cancer. *Cancer never affects a healthy organ.* In every case in which I have had an opportunity of verifying it I have found that the cancer patient was suffering from chronic intestinal stasis, and that the infection by cancer was an indirect consequence of this condition. Cancers of the skin and tongue which are produced by chronic traumatism alone are not included in this category.

If this assumption is correct, it is obvious that to prevent the development of cancer it is necessary to obviate the static changes in the gastro-intestinal tract which result from the diet and habits of civilization. That an enormous amount of benefit and a corresponding freedom from cancer has been obtained by the use of paraffin is in my opinion undoubted. I started to employ paraffin when I recognized the mechanics of chronic intestinal stasis, and have used it in every case since, as it would have been impossible and unnecessary to operate on all patients suffering from this disability. Its usefulness is also confirmed by the extraordinary manner in which it has spread over the whole world. I doubt whether any other material or drug has ever given anything like the same comfort and security from disease that it has. By its use the irritation and harm which result from the action of a purgative are avoided; it acts on the principle of the flushing tank, rendering the motion soft and ensuring two or three free actions a day.

The other diseases that affect the subjects of chronic intestinal stasis are rheumatoid arthritis, Still's disease, tubercle, Raynaud's disease, many splenic affections, ulcerative colitis, many skin diseases, diabetes, ulcerative endocarditis, gout, etc.

Our chief interest at the present time, therefore, should be to prevent the development of chronic intestinal stasis, and so to obviate the incidence of the several conditions which are due directly or indirectly to its presence, of which latter group cancer interests the public particularly because of its frightful mortality and the physical and mental anguish so frequently associated with it.

How is this to be done? It can only be effected by a complete revolution in our diet and in our habits of life. We must assimilate them to those of the aborigines, among whom the entire stasis sequence is unknown, and the more thoroughly we approach the conditions of primitive life the more successful shall we be in avoiding the occurrence of a very great number of diseases.

Roughly, it would seem that the diet should consist as much as possible of vegetable matter; that it should be consumed largely in a raw state to avoid damage to vitamins; that coarse indigestible material be retained in order to increase the bulk of the intestinal contents, and the stimulating action on the reflexes; that food which if kept becomes offensive and poisonous should be eliminated as much as possible; and that the consistence of the faeces be diminished and the frequency of evacuation increased. Last, but not least, every possible endeavour should be made by mothers to suckle their infants for a sufficient length of time.

So much for the prevention of stasis. As to the treatment of the existing condition apart from medical measures such as a Curtis belt, paraffin of high viscosity, kaolin,* and abdominal exercises, all operative measures on any portion of the gastro-intestinal tract should be started by an examination of the last kink, and by the careful freeing of the bowel from its acquired attachment to the iliac fossa. This must be done thoroughly and with the greatest care, and when the mesentery has been restored to its normal length and the bowel to its normal mobility any raw surfaces of mesentery must be accurately covered by peritoneum to obviate the formation of inflammatory adhesions.

Perhaps of all operations in surgery this procedure is followed by the most wonderful effect. The whole condition of the patient is transformed and he is rapidly restored to vigorous health. After all this is not surprising, since it is because of this obstruction that all the other changes in the gastro-intestinal tract, whether mechanical or toxic, ensue. I have on very many occasions derived the same advantages by this simple operation that I have previously had from colectomy at a considerably greater risk. Because of the remarkable results which can be obtained by this procedure I am anxious that its value should become recognized.

Having dealt with the last kink, the colon should be examined in its entire length to make sure that no secondary constriction has developed, and particularly in the region of the splenic flexure. Any acquired band found controlling the lumen of the bowel should be carefully divided, and any raw surfaces deprived of peritoneum must be covered in accurately. An inflamed or controlling appendix or an ileal kink should be looked for and dealt with if present.

A CASE OF RETROPHARYNGEAL LIPOMA.

(With Special Plate.)

BY

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THE following case deserves to be recorded, if only on account of its rarity.

A gentleman, aged 41, was sent to me on May 13th, 1923, by Dr. Nesbitt. He complained of "phlegm in the throat" for a very long time, getting worse for the past year.

Inquiries addressed to the patient and some of his intimate friends made it clear that for at least twenty years he had not swallowed freely; food had to be taken in small quantities, very slowly and with frequent sipping. He found meat the most difficult and rarely attempted to eat it oftener than once a day. Pungent food always provoked a cough, and such things as sherry caused acute distress. The voice had the characteristic twang one associates with retropharyngeal abscess or tumour. For months past his breathing had not been free. At night it became so stertorous that people within earshot were kept awake, and it was on more than one occasion the subject of complaint in hotels.

On examination, the back wall of the pharynx was seen to be sharply bulged forward at the level of the base of the tongue, so as to come in contact with the epiglottis and prevent inspection of the larynx. The tumour could be reached by the forefinger and was quite soft, but gave no impression of fluctuation. His temperature and pulse were normal and there was no pain.

A radiogram taken by Dr. Hardman is reproduced in the accompanying plate (Fig. 1). It showed that a tumour lay in front of the vertebral column, behind the pharynx and upper portion of the gullet, separating these structures by a distance of at least an inch. The vertical line along the

* Kaolin, which is recommended to prevent decomposition in the intestines, may be dispensed by rubbing up with water and then gradually adding mucilage of tragacanth. It can be flavoured to taste. Details were given by Dr. Pirie in the JOURNAL of November 24th, 1923 (p. 1013). He recommends about 3 oz. of kaolin to 9 oz. of water, with 1 oz. of mucilage, and that a port wineglass be taken six times a day.

SIR ROBERT WOODS : RETROPHARYNGEAL LIPOMA.

FIG. 1.—C, Cricoid. H, Hyoid.

FIG. 2.—C, Cricoid. H, Hyoid

H. WALLACE JONES : DEXTROCARDIA.

FIG. 1.

FIG. 3.

front of the bodies of the vertebrae instead of being convex was somewhat concave forwards, a proof that the tumour had exercised prolonged pressure on the spine. The lower border of the growth was level with the suprasternal notch. I had never seen anything like it nor could I find any reference to it in literature.

The length of the history and the appearance and feel of the tumour made it highly improbable that there was either an abscess or an infiltrating growth; a diagnosis of benign tumour was made and lipoma suspected. Mr. R. C. B. Maunsell, V.P.R.C.S.I., who saw the patient with me, agreed; operation was decided on and I had the advantage of his assistance at its performance.

In debating how removal should be attempted subhyoid pharyngotomy was mentioned only to be dismissed, for, though that route might give good access, the danger of septic contamination from the pharynx was too great. Dyspnoea during the anaesthesia was certain, and of the two methods of avoiding it—namely, the administration of ether by the intratracheal method or preliminary laryngotomy—the latter was selected. Stertor began before anaesthesia was properly induced, but the insertion of the laryngotomy tube made matters quiet.

After a change of gloves a free incision was made along the anterior border of the left sterno-mastoid muscle, the omo-hyoid was reflected, the superior thyroid artery ligatured and divided, and the tumour thus exposed. It was found to be a lipoma of a very large size. By gentle manipulation with the help of gauze sponges the growth was gradually drawn from its bed. It was bigger than a man's fist, and quite filled a 2 lb. jam-pot. The sac of the pharynx where it was spread over the mass was quite thin, but it was not wounded. One or two deep catgut sutures were inserted to lend the pharynx support during swallowing, and a drainage tube left in for a day.

The patient was fed by enemata for the first forty-eight hours and subsequently by a tube for a few days, after which he swallowed well. Recovery was uneventful. Fig. 2 is a corresponding radiogram taken some three weeks after operation. The contrast between the relations of the hyoid bone and larynx to the vertebral column before and after operation is well shown.

THE HIPPOCRATIC FINGERS.

(With Special Plate.)

BY

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THOUGH clubbing of the fingers has been noted by clinicians from very early times, and though much has been written of the conditions with which it is associated, there still exists great uncertainty, not only with regard to the mechanism of its production, but even concerning the simpler question of its morbid anatomy. In the few cases in which such a finger has been examined microscopically no two observers agree as to the essential changes in the soft parts, although there is general agreement that the bone is not altered. It is not surprising, therefore, that there is considerable difficulty in offering a satisfactory explanation of the manner in which clubbing arises, and this difficulty is certainly not diminished by the extraordinary variety of diseases in which the deformity appears. I have been able to obtain a finger removed during life from a patient who exhibited a marked degree of clubbing, and I propose to compare the microscopical appearances of a longitudinal section through its tip with those of a similar section through a normal finger, and to discuss briefly the mechanism of the production of clubbing.

History.

A woman, aged 36, was admitted to the Western Infirmary, Glasgow, on October 4th, 1921, with swelling of the wrists, knees, and ankles. She stated that her illness commenced in March, 1921, when she became easily tired, was troubled with a short cough, and noticed that her ankles were swollen and stiff without any accompanying pain. In April the wrists became swollen, and in May the knees were similarly affected. During the latter month the tips of her fingers and toes became enlarged. After two weeks this

enlargement diminished to a considerable extent, but at the end of June it returned and persisted. From that time until the date of her admission to hospital there had been no alteration in the condition of her joints except that the swelling of the ankles had diminished slightly.

Condition on Admission.

Examination of the wrist-joints showed that there was considerable thickening of the periarticular tissues. In spite of this the movements of flexion and extension were complete in range and were not associated with pain. The joints of both hands appeared normal, but the tips of the fingers showed a marked degree of clubbing. In both knee-joints there was thickening of the periarticular tissues and synovial membranes. There was considerable limitation of flexion, especially of the left knee, where excess of fluid was present in the joint. The patient stated that she felt pain and stiffness in these joints only when she walked. There was thickening of the periarticular tissues of the ankle-joints with no pain and no limitation of movement. The toes of both feet showed marked clubbing.

X-ray examination revealed new bone formation underneath the periosteum at the lower end of the radius and ulna on each side. Similar new bone formation was seen in the metacarpal and metatarsal bones and at the lower ends of the tibiae and fibulae. At this time impairment of the percussion note at the left base and diminution of the respiratory murmur with a few coarse crepitations were the only physical signs of disease of the lung.

After-History.

In December, 1921, the proximal phalanx of the right little finger became slightly swollen and tender, and a radiogram showed almost complete disappearance of the bone. This was obviously due to malignant disease of the phalanx, and accordingly the finger was amputated.

Soon afterwards the physical signs of involvement of the left lung became more marked, she developed metastatic growths in different parts of the body, and died on February 13th, 1922.

Post-mortem Examination.

A large mass of tumour growth was found infiltrating the left lung and histological examination showed it to be an endothelioma.

The case therefore presented the usual features of pulmonary hypertrophic osteo-arthritis arising from a malignant growth in the left lung. There is one point, however, in the history of the case which is of interest—namely, the very definite statement of the patient that after the finger-tips had become markedly swollen, the swelling receded to a considerable extent for nearly four weeks and then returned.

Figure 1 is a photomicrograph of a longitudinal section through the clubbed finger. For purposes of comparison I was able to obtain a normal finger which had been removed by accident, and a photograph of a similar section made through the tip is shown in Fig. 2. It will be noticed that the most striking difference is in the thickness of the part lying between the nail and the phalanx. Figs. 3 and 4 show photomicrographs of this part of the sections of the clubbed and normal finger respectively, and from these it will be seen that the greater thickness of the former is due to the presence of very marked oedema. The connective tissue fibrils, instead of running in compact bundles, as seen in the section of the normal finger, are separated from each other, in many places widely. There is no fibrous thickening of the rete mucosum, no dilatation of the capillary loops under the nail, no increase in the connective tissue, and no excess of fat, such as have been described by Buhl,¹ Freytag,² Liebermeister,³ and Buzzard⁴ respectively in similar sections. The essential difference between the clubbed and the normal finger is the oedematous condition of the tissue of the finger-tip, especially of that part of it lying between the nail-bed and the bone.

It may appear undesirable to base a general argument on the facts observed in one case. Nevertheless, I am of opinion that oedema is the primary pathological basis in every case of clubbing, and I propose to examine this view in the light of my own observations and those of others. In the first place it is to be noted that, though in the majority of cases the condition is of slow development, and, once developed, is permanent, yet many cases have been reported where clubbing appeared quickly and disappeared just as quickly when the prime cause was removed. I have observed its appearance in a case of pneumonia and its disappearance during convalescence, and similar observations have been recorded by others. West⁵ described a case of deep-seated empyema where marked clubbing developed in fourteen days and disappeared when the patient recovered. He did not think that the deformity was due to oedema, but in cases like these it is difficult to conceive any pathological process other than oedema which would give rise so rapidly to