next consulted a rhinologist, who told her that her nasal sinuses were perfectly normal. An x-ray examination was carried out at this time also, and revealed nothing abnormal. Finally, as already stated, she consulted me.

On examination I found that she was suffering from obvious symptoms of thyroid intoxication, with tachycardia, pulse rate being 140, palpitation, extreme nervousness and restlessness, insomnia, and loss of weight. She refused to have her basal metabolism estimated, but calculation made from the pulse pressure formula gave an estimated metabolism of 118. The right eye was extremely prominent, and showed a well-marked von Graefe's sign. The left eye appeared normal. No vestige of a thyroid gland could be felt by the most careful palpation. After consideration the only possible diagnosis seemed to be that all the patient's symptoms, including the exophthalmos, were due to an overdosage of thyroid extract. In consequence, the extract was stopped, and the patient was put to bed for some time and treated with bromides. In the course of a couple of months the symptoms had largely disappeared, and after six months the patient was practically restored to health. As the general symptoms subsided, the exophthalmos diminished, but up to the date of my last seeing her—in June, 1928—the right eye was still somewhat more prominent than the left.

THE SALE OF THYROID PRODUCTS

Although the object of this note is to call attention to the occasional production of ocular symptoms from thyroid administration, opportunity is taken of urging the necessity of introducing some restrictions in the sale

of thyroid products. Since the earliest days of thyroid medication it has been recognized that overdosage can produce serious symptoms. These symptoms are attributed by some to the thyroid substance itself, and by others to decomposition products contained in extracts. However this may be, any physician of experience must have met with many cases in which long-standing ill-health with hyperthyroid symptoms has been caused by excess of this drug, and also certain acute cases in which sudden palpitation, giddiness, dyspnoea, and nervous terror have been brought about by prolonged overdosage. Möller, writing in the *Acta Medica Scandinavica*, has recently called attention to the subject, and suggests that thyroid substance should be put on the list of dangerous drugs. In most cases the fault lies not with the physician but with the patient. Patients learn that thyroid substance is efficacious in obesity, and without professional advice obtain thyroid tablets from a chemist, and, quite unaware of any possible harmful results, continue to take large doses for prolonged periods. If thyroid substance could be obtained only on a doctor's prescription, and that only for a limited period, the present by no means uncommon ill results could be avoided.

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HALLUX VALGUS: A NOTE ON OPERATIVE TECHNIQUE

BY

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From a large experience of the treatment of this deformity at the Orthopaedic Department of the Miller Hospital a routine operation has gradually evolved, which has been attended by such gratifying results that a description of it may be of interest.

CHOICE OF PATIENT

Any patient who has a painful bunion over the inner side of the big toe joint, with deflection of the toe outwards, causing the second toe to override it, is judged suitable. This is the typical condition for which the patient seeks relief. Sometimes it is the unsightly appearance, sometimes the pain, sometimes the impossibility of getting shoes to fit, which sends the patient to hospital: sometimes all three together. The fact that the bunion is acutely inflamed does not contraindicate operation; it is an additional reason for it.

Age is no bar. The trouble may be present in a child aged 12 or in a man 60 or over; all react to the operation in just the same way, and are entirely relieved. Convalescence may be slightly longer in an elderly person—that is all.

The nature of the patient's occupation is certainly of influence in coming to a decision. One does not operate for choice on a person who will go back to employment which requires prolonged standing. Yet where no other work can be found, as in the case of a nurse, the operation may be performed with confidence, provided the period of convalescence is longer than usual. I should refuse, however, to operate on a toe-dancer or a professional footballer.

Women who wear high heels ask if they will be able to do so afterwards. In my experience there has never been any difficulty about this; the high heel position is always perfectly comfortable after the operation has been performed.

PREPARATION OF PATIENT

After thorough washing with soap and water, with special attention to the nails and nail folds, the feet are painted with tincture of iodine and wrapped in a sterile towel. The painting with iodine is repeated on the table. If the bunion is inflamed, the inflammation must be allowed to subside by rest in bed for two or three days. Under no circumstances is the operation performed in the presence of inflammation.

THE OPERATION

No tourniquet is used. The foot lies on its outer side, and a horizontal incision 2 inches long, parallel with the length of the toe, is made through the bunion, extending equally beyond it in both directions; it is planned to lie rather nearer the dorsum than the sole. The knife cuts down on to the neck of the metatarsal and through the layers of the bunion, exposing the head, the line of the joint, and the base of the phalanx, all in one sweep. The neck is cleared of periosteum by inserting two periosteal detachers in the line of the incision, one detaching everything above and levering it up, the other detaching everything below and levering it down. These two detachers are held with their points at right angles to each other by an assistant, and the now tense capsule is freed from the head by a few touches of the knife. Finally, the capsule is cut through vertically, opposite the joint interval, exposing the head completely. The blades of the bone-cutting forceps are insinuated above and below the neck one at a time, the detachers being separately withdrawn to make way for them, and are adjusted as close to the head as possible, with their bevelled edges turned towards it. Only the head is removed, not half an inch of the shaft as well. When the blades are in position the neck is cut through, and the severed head levered out with the closed bone-cutting forceps and the two detachers, so that it is grasped with Lane's small bone-holding forceps, twisted off, and removed. The skin edges are brought together with tissue forceps, sutured with continuous horsehair, and the operation finished by painting with iodine, inserting a gauze pad between the first and second toes, and applying a gauze dressing.

No part of the bunion itself is removed. When the patient is returned to the ward, the end of the bed is raised on 6-inch blocks, and a cradle placed over the operated foot.

AFTER-TREATMENT

This is of great importance. On the second day, strips of adhesive plaster, half an inch wide, are applied to the dorsal and plantar aspects of the big toe, and their long ends are carried up and fixed to the cross-bar of the cradle to act as an extension to pull the toe straight and make certain that there will be an appreciable space between the base of the phalanx and the cut surface of the metatarsal shaft. It is found that the patient is quite able to regulate the amount of this extension suitably by withdrawing the feet slightly up into the bed. At night the strips are undone from the cross-bar and fixed again in the morning. After four or five days the patient is shown how to pull on these strips with his hands many times in the twenty-four hours, and to assist in obtaining a straight but movable new joint. The attachment to the cradle is discontinued. After ten days the stitches are removed, but not the strips; and gentle massage to the scar is begun. In fourteen days the patient is allowed to walk in soft bedroom slippers; the strips are dispensed with altogether, and exercises are started. These consist of frequently repeated flexion and extension movements of the toes, at certain stated times every day.

In a severe and long-standing case the four outer toes have all become deflected too; these must be made to lie in their normal position again. This can be done by active and passive movements, by pulling and stretching, and by inserting small pads of gauze between the second, third, fourth, and fifth toes. Then the pressure of the slipper on the fifth toe is enough to keep all these toes straight, the malposition of the big toe having been corrected.

After three weeks the patient must be fitted with walking shoes to fit the new shape of the feet, with stout soles, ample width in the tread, and straight on the inside. Patients find a flat heel less comfortable than a moderate one, especially if accustomed to wearing a high heel. In six weeks the patient can return to work, provided it does not consist in standing all day: if it does, or if both feet have been operated on, the period of convalescence must be longer.

Massage and exercises are continued throughout the whole of this period, and at night the small pads are placed between the toes. If tenderness is complained of at first when walking, it can be relieved by binding the front part of the foot firmly with one or two encircling strips of adhesive plaster.

REMARKS

The bunion—which I take to mean all the soft parts which form over the prominent bone, consisting of a bursa, fibrous tissue, and thickened skin—is left completely alone, except for the necessary incision at the operation. It has acted as a protection for years, and had better continue to do so. What is not wanted will gradually be absorbed. If it is cut away, there is a danger of the skin becoming adherent to the bone and causing a painful scar—the last thing desired.

No artery forceps are applied. If the operation is performed quickly, say five minutes from start to finish, the periosteal detachers stop all bleeding when in position, and no ligatures are required.

The bone is cut cleanly through, subperiosteally; this means that no bone dust or splinters are left in the wound, and that a cuff of periosteum remains to cover the cut end of the shaft.

Occasionally the extensor tendons of one or more of the toes may be found contracted, and are lengthened

by subcutaneous tenotomy, but this is not a routine measure. If extension is not applied, the big toe shrinks back into the foot too much (the operation always shortens the foot slightly) and may become stiff from fibrous ankylosis between the phalanx and the metatarsal shaft. Surgeons have tried to prevent this by removing some of the shaft as well as the head; but this is weakening the foot unnecessarily.

CONCLUSIONS

The important points are:

1. Cut the bone correctly.
2. Leave the bunion.
3. Apply extension.
4. Give exercises and massage.
5. Order shoes that fit the newly constructed foot.

AMOEBIC HEPATITIS WITH HAEMATEMESIS

BY

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The following account of a case of amoebic hepatitis with severe haematemesis is worthy of record, as I have been unable to find a similar case in the literature.

A nurse, aged 40, who served for two years in Mesopotamia during the war, came under my care in 1925. The only sickness recorded during her war service was as follows: appendicectomy in August, 1916; pain in the lower part of the abdomen in January, 1918; sand-fly fever in August of the same year; anaemia and debility with abdominal pain and vomiting in September, 1919. She was invalided to England. Laparotomy was performed in April, 1920. The gall-bladder was excised and thirty-nine stones were removed. The right ovary was cystic. In August, 1920, she complained of pain in the epigastrium. Amoebic hepatitis was diagnosed in November, 1923. *Entamoeba histolytica* was found in the stools. The liver was two finger-breadths below the costal margin.

After the last diagnosis she received a disability pension in 1924, and came under my care in the following year. She had then a definitely enlarged liver, and suffered from chronic constipation. From 1925 to 1929 she remained at work at her hospital and reported to me once a month for treatment. During this time she only had an occasional "flare-up," which rapidly subsided under appropriate treatment. While under my care no *E. histolytica* cysts were found in the stools in the course of numerous examinations. Towards the end of 1929, as her health had been much the same for several years, her disability pension was made final, and I did not see her again until quite recently. In January, 1930, after having more or less acute pain in the liver for some days, she had a severe haematemesis, vomiting about two pints of blood, and melaena. She was still more or less constipated, and the stools were very pale in colour. As her condition had worsened since her pension was made final, her case was reopened for further adjudication, and I saw her again. The question had arisen whether the haematemesis could be regarded as a sequel of her invaliding disability.

On examination in October, 1930, I found that she had so far recovered that her condition was much the same as it was in 1929. There was no jaundice or apparent anaemia, and no enlargement or increase in liver dullness. The heart and lungs were healthy. There was some tenderness in the epigastrium on light palpation, but no mass could be felt. The ascending colon was palpable and tender. The stool examination was negative. A complete radiological examination was made of the whole intestinal tract, and the report was as follows:

"Considerable elongation of stomach. Stomach is hypotonic. Intermittent hyperperistalsis. No evidence of gastric ulcer. Duodenal cap showed persistent deformity; the second part is pulled over to right. Deformity more suggestive of adhesions than that due to an ulcer. Marked ptosis of