4. The site of the ulceration is the site of maximum wear and tear by gastric contents whose normal neutralization has been interfered with by the altered gastric rhythm.

5. The gastric secretions, innocuous to the stomach wall under normal conditions, cause irritation and eventual ulceration, when the gastric rhythm is altered; trophic changes may also prepare the way for this action.

6. The fundamental condition on which these morbid changes in gastric motility and rhythm depend is doubtless a disorder of gastric innervation, which may have its origin in toxic influences, or psychic influences, or in reflex influences from disease elsewhere. The innervation of the stomach is not, however, so completely analysed as to make it possible to say whether these influences bear on an autonomic gastric system or whether they affect the stomach by way of the vagus or sympathetic. There is, however, some evidence that in the gastric type, which is usually associated with duodenal ulceration, there is some inhibition of impulses by the splanchnic path, and that in the gastric type, which is usually associated with gastric ulceration, it is the vagus impulse which is depressed.

REFERENCES

- ¹ *Ulcers of the Stomach* (London, Arnold, 1913), and *BRITISH MEDICAL JOURNAL*, 1912, ii, 1288. ² *Surg., Gynecol. and Obstet.*, 1920, xxx, 374. ³ *BRITISH MEDICAL JOURNAL*, 1912, ii, 922. ⁴ *Ibid.*, 1912, ii, 936. ⁵ *Journ. Amer. Med. Assoc.*, November 29th, 1913. ⁶ *Journ. Infect. Dis.*, xix, 333. ⁷ *Surg., Gynecol. and Obstet.*, xxxiii, 19. ⁸ *Journ. Infect. Dis.*, May, 1923, p. 315. ⁹ *BRITISH MEDICAL JOURNAL*, February 10th, 1923. ¹⁰ *Lancet*, 1925, i, 701. ¹¹ *Mayo Clinic Papers*, 1920. ¹² *Lancet*, April 4th, 1925. ¹³ *Amer. Journ. Phys.*, 1915, vol. 38, p. 280. ¹⁴ *Quart. Journ. Exper. Phys.*, 1914, viii, 1. ¹⁵ *Physiological Reviews*, 1923, iii, 1. ¹⁶ *Amer. Journ. Phys.*, 1915, vol. 38, p. 214. ¹⁷ *Surg. Clinics of N. America*, June, 1925. ¹⁸ *Arch. Ital. di Chirurg.*, Bologna. ¹⁹ *Proc. Roy. Soc. Med.*, 1913, Electro-Therap. Sec., p. 138. ²⁰ *Surg., Gynecol. and Obstet.*, 1916, vol. 22, p. 402.

THE SURGICAL TREATMENT OF DANGLE-FOOT.*

BY

ROBERT OLLERENSHAW, M.D., F.R.C.S.,

ORTHOPAEDIC SURGEON TO THE ROYAL MANCHESTER CHILDREN'S HOSPITAL AND TO SALFORD ROYAL HOSPITAL.

IN dealing surgically with the residual paralysis of anterior poliomyelitis our endeavour must be to utilize to its best possible advantage the power which remains to us and to make the limb as efficient as possible.

In the leg, where weight has to be borne, we must attempt to provide stability and independence of extraneous supports. In drop-foot many operative procedures have attempted to suspend the foot by slings of silk, tendon fixations, and fascial bands, but the results have on the whole been disappointing, as the constant drag of the pendulous foot in time produces elongation of the artificial ligaments. Many such cases seem to be brilliant successes for a few months, but, seen a year or two later, have to be written off as ineffective.

The commission appointed by the American Orthopaedic Association, which inquired into the stabilizing operations on the foot, reported that as regards drop-foot "none of the standard operative measures considered can be recommended as a standard procedure."

Two years ago I began to try a method devised by W. C. Campbell of Memphis, U.S.A., by which the interference with the drop-foot was not provided on the anterior aspect of the ankle in the form of a sling, but at the back of the joint by a "bone stop." In a large percentage of paralytic feet it is necessary to remove bone to correct deformity or to stabilize the mid-tarsal region and subastragaloid joint. The bone thus removed is utilized to build up a bone stop at the back of the ankle.

The usual incision for astragalectomy, and for most stabilizing operations, is used, commencing one inch above the ankle, internal to and parallel with the fibula, and passing down towards the external cuneiform. The deep fascia is divided; the extensor tendons are retracted inwards. The ligaments and periosteum are cut down to bone and the mid-tarsus exposed. The rounded articular surface of the head of the astragalus is removed by osteotome. A large part, or the whole, of the scaphoid is removed. I have performed this operation at the age of 8 years and upwards, and find that in younger subjects it is better to remove the whole scaphoid. The

articular cartilage is now removed from the os calcis and cuboid with enough underlying bone to permit of good apposition of the mid-tarsus. The subastragaloid joints are next opened and the articular cartilages completely

FIG. 1.—A lateral radiographic view of a foot a week after operation; the scaphoid, with its superimposed fragments, can be clearly identified.

FIG. 2.—Shows the foot three months after operation, when the fusion of the various elements is seen to be complete.

excised. In exposing these joints the pad of fat and connective tissue lying in the subastragaloid fossa should not be removed, but merely turned aside and later replaced so as to leave no "dead space." The removed portions of bone and cartilage are placed in saline, and, while the anterior incision is being closed, an assistant cuts away all cartilage and prepares the bony pieces for the construction of the "stop" behind the joint.

The posterior incision is now made about six inches long directly over the tendo Achillis. The tendon is cleared and divided as for a Z-lengthening operation. The proximal and distal ends are turned up and down. The loose tissue lying between the tendo Achillis and the back of the tibia is now incised in a vertical direction and the back of the tibia and the upper surface of the os calcis exposed. A notch is cut in the os calcis large enough to receive the broader end of the trimmed scaphoid. This is placed in position and tapped down so as to get a hold. The smaller pieces of bone are now grouped together above the upper end of the scaphoid and the suturing of the tendo Achillis holds them nicely in place. The required amount of lengthening of the tendon is made so as to allow a right-angled position of the ankle. The skin is closed and a light plaster cast applied for six weeks. At the end of this time a brace is fitted so as to prevent any movement in the direction of plantar flexion for six months. I am in the habit of using a posterior iron for this purpose, as advocated by Campbell, and find it very effective.

I have now operated on nineteen cases in this manner. The operation which I am to perform at the Children's Hospital this afternoon will be the twentieth of the series. Two patients have had a secondary operation for repair of the bone stop, which had fractured at a point where the scaphoid joined the other fragments, a few months after use of the foot had been permitted. Repair was carried out by means of a small bone pin driven through the stop. If any later cases need repair I intend to cut a strip of bone from the back of the tibia for the purpose. I shall also show this afternoon eight patients upon whom I did this operation more than a year ago, so that you will be able to judge of the stability of the feet and of the effect of the "bone stop" in preventing drop-foot.

THE TREATMENT OF AMOEBIC DYSENTERY
BY AUREMETINE.

BY

J. GRAHAM WILLMORE, M.D., M.R.C.P.,

AND

W. HARRISON MARTINDALE, PH.D., PH.CH., F.C.S.

IN a paper¹ read by us before the Royal Society of Tropical Medicine and Hygiene in May, 1923, the treatment and the results in a series of 503 cases of amoebic dysentery were detailed. It was shown that what might be termed the standard treatment in those days—consisting of 12 grains of emetine by intramuscular injection and 60 grains of emetine bismuthous iodide by the mouth, given concurrently in twenty days—was followed by a cure (as to the duration of which it was possible only to speculate) in less than one-third of the cases, and we

* Read before the meeting of the British Orthopaedic Association in October, 1925, when the operation was demonstrated and a series of results shown at the Royal Manchester Children's Hospital.