

THE OPERATIVE TREATMENT OF HALLUX
VALGUS AND BUNION

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The etiology and pathology of this distressing affection are well known. Though it is objectively trivial, not dangerous to life, its subjects are frequently more grateful for relief than are those on whom some life-saving operation has been done.

Numerous methods of operation have been devised and practiced, notably those of Barker, Hueter, Riedle, Weir, Fowler and Mayo. In all, except that of Fowler, the approach to the joint is made from the inner side of the foot, which places the scar in a position where it will be subject to pressure from the shoe. Mayo¹ states that this is but a theoretical objection and that practically it causes no trouble.

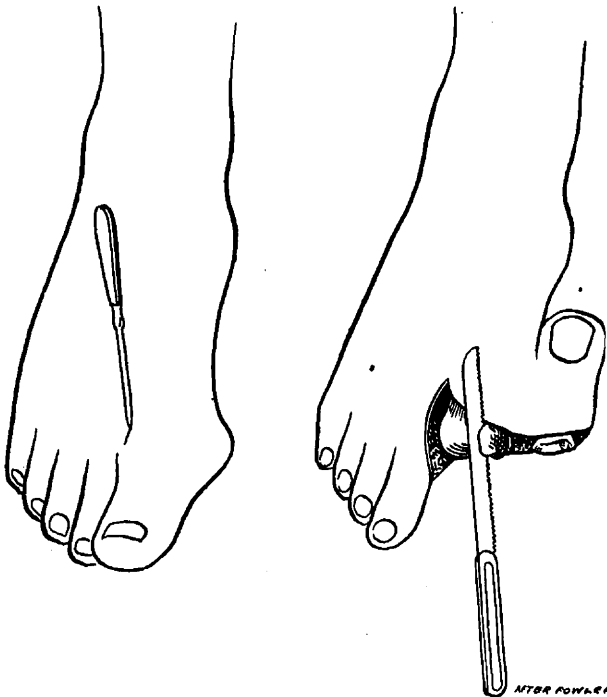


Fig. 1.—Fowler's incision for hallux valgus; to be made by dissection, not transfixion, close to outer side of first metatarsal bone; reversal of great toe. Case of moderate degree is shown, requiring removal of but a portion of metatarsal head.

The method of Fowler² as modified by me possesses certain advantages which may be summarized as follows:

1. The incision is in a location where, even on theoretical grounds, it cannot be objectionable.
2. It affords a much better exposure of the diseased ends of the bones than any other method and permits accurate shaping of the new articular surfaces.
3. The joint is opened on the outer³ side, dividing the shortened external lateral ligament, an important step in avoiding recurrence.
4. Ankylosis is prevented and a new joint formed by the interposition of a fatty-fibrous flap.

DESCRIPTION OF OPERATION

The incision is made between the affected toe and the second toe, beginning well behind the head of the meta-

tarsal bone on the dorsum of the foot and extending directly through between the metatarsal bones to the plantar surface (Fig. 1). It should not be made by transfixion but by careful dissection, the outer side of the first metatarsal bone being hugged closely. This is important, as will be seen later. The external lateral ligament of the affected joint is freely divided and the great toe forcibly dislocated inward and reversed, the articular surfaces of the metatarsal head and the proximal phalanx presenting (Fig. 1). So much of these surfaces as may be necessary is now removed, preferably with a mounted wire saw (Fig. 2).

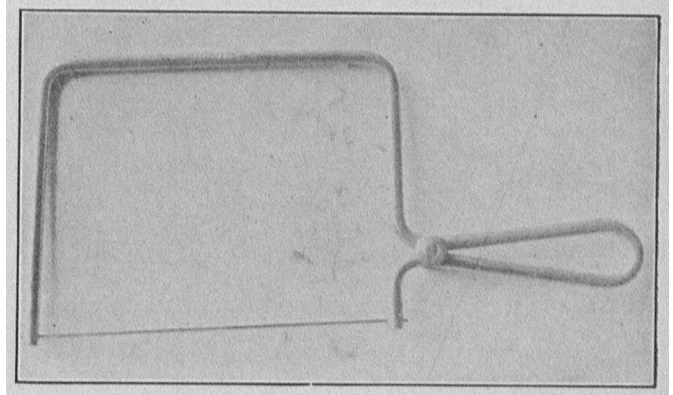


Fig. 2.—Mounted wire saw. The bone ends can be sawed into any shape desired with ease. The saw is cheap and can be procured at any hardware store.

In bad cases the head of the metatarsal and part or all of the base of the phalanx require removal. If so, after the periosteum has been pushed back, the metatarsal is sawed from before backward to leave a convex surface to oppose the base of the phalanx sawed in the same direction with a concave surface (Fig. 3). The plane of these surfaces should be at right angles to the shaft of the bones. Thus we substitute for the ball-and-socket joint a hinge-joint permitting of but little lateral movement.

A fibrous-fatty flap is now dissected up beginning at the web between the toes and having its base at the point

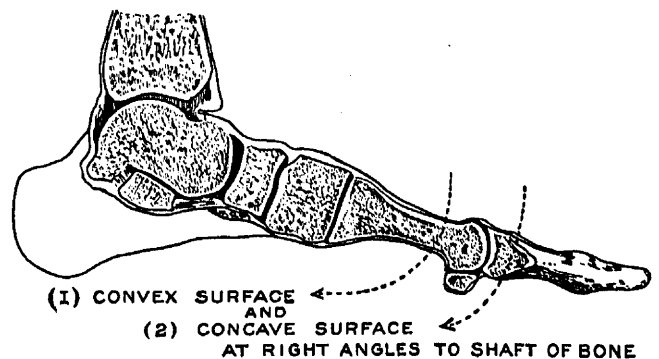


Fig. 3.—Only extreme cases would require removal of amount of bone here depicted. The direction of the lines of bone-section for forming a hinge are indicated.

of section of the metatarsal bone. This is turned outward over the convex end of the metatarsal and fixed in place on the inner side of the bone with a few catgut sutures (Fig. 4). Abundant tissue is available for this flap, since the intermetatarsal space is much increased in hallux valgus (Fig. 5), and the primary incision lies close to the first metatarsal bone.

Instead of this flap, the bursa lying over the head of the metatarsal on the inner side may be used to inter-

1. Mayo: Ann. Surg., August, 1908.

2. Fowler: Treatise on Surgery, II, 620.

3. Throughout this paper the terms "outer," "inner," "external" and "internal" refer to the midline of the body and not to the midline of the foot.

pose between the sawed surfaces as in Mayo's operation. The fatty-fibrous flap is preferred, since it is normal healthy tissue, while the bursa is in a state of chronic inflammation (bunion). If the bursa shows much evidence of disease it should not be used for this purpose, but dissected out.

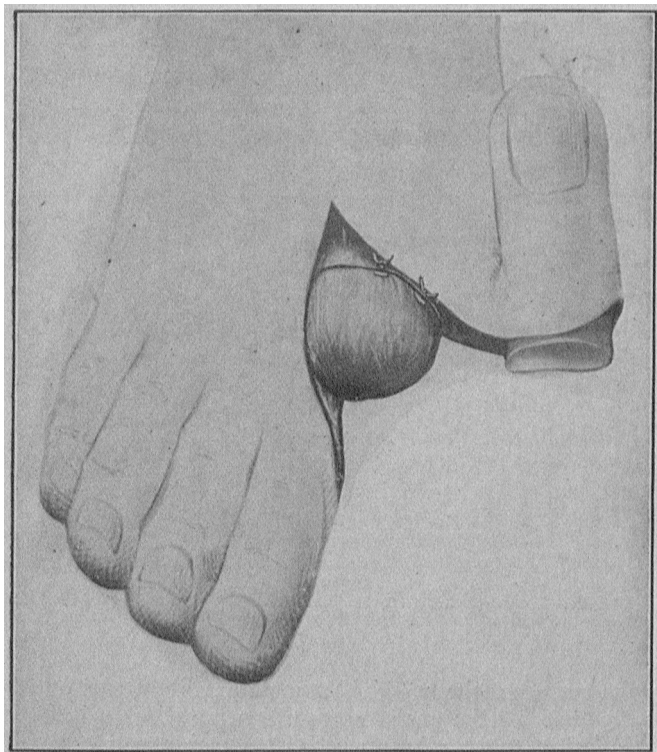


Fig. 4.—The entire head of the metatarsal is supposed to have been removed and the fatty-fibrous flap from the intermetatarsal space turned over sawed surface to inner side and fixed with a few catgut sutures. The artist has improperly represented it in that the covered end of the metatarsal projects too far.



Fig. 5.—Exaggerated intermetatarsal space between first and second bones. Severe case prior to operation. The deformity has been accentuated in right foot by reason of amputation of second toe for hammer toe, done some years before.

The tendon of the long extensor of the great toe is cut and permitted to retract. To attempt to relocate it on the toe (Weir and Mayo) merely invites recurrence of the deformity while it serves no useful function. No one who wears shoes can suffer any inconvenience from the loss of this tendon. The sesamoid bones beneath are not disturbed.

The toe is now returned to its normal position and the capsule of the joint sutured loosely. The incision is closed with three or four silkworm-gut sutures and continuous lock-stitch 00 iodine catgut. Drainage is provided for with a few strands of No. 1 iodine catgut. A wet dressing of 1 : 500 liquor iodi compositus (Lugol's solution) is applied and a shallow cigar-box with top and one end removed is placed over the foot to protect it from the bed-clothes. In lieu of the box, a molded plaster splint (not cast) may be applied along the inner



Fig. 6.—Same patient as Figure 5, one month after operation.

side of the foot to project beyond the toes and to which the great toe is bandaged somewhat inverted.

Some operators, notably Lovett,⁴ seek to obtain firm union and ankylosis after resection of the joint in order to prevent recurrence. This interferes greatly with walking, as a natural gait involves flexion at this joint with each step.

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THE LOCAL SPECIFIC THERAPY OF INFECTIONS *

II. TREATMENT OF CERTAIN INFECTIONS

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I propose to lay before you in this lecture the results already obtained by the method of local specific treatment of infection. They are derived partly from experiment and partly from experience with human cases of disease, and they relate chiefly, but not exclusively, to the infections of the membranes of the central nervous system which have formed the starting point of the studies on which the method has come to rest. It may be said, however, that the employment of the method is not limited to the cerebrospinal cavity, although the full extent of its application has still to be worked out.¹

The reasons are perhaps obvious for utilizing the infections of the meninges as the point of first departure.

4. Lovett: *Keen's Surgery*, II, 565.

* This is the second of two lectures which as here presented are based on the Harben lectures of 1912 given before the Royal Institute of Public Health, London, and the Trimble Lectures of the Medico-Chirurgical Faculty of Baltimore of 1913. The first lecture appeared in *THE JOURNAL*, Aug. 16, 1913, p. 447.

1. Flexner: *The Biologic Basis of Specific Therapy*, Boston Med. and Surg. Jour., 1911, clxv, 709.