

THE SURGICAL TREATMENT OF BUNION.

BY CHARLES H. MAYO, M.D.,

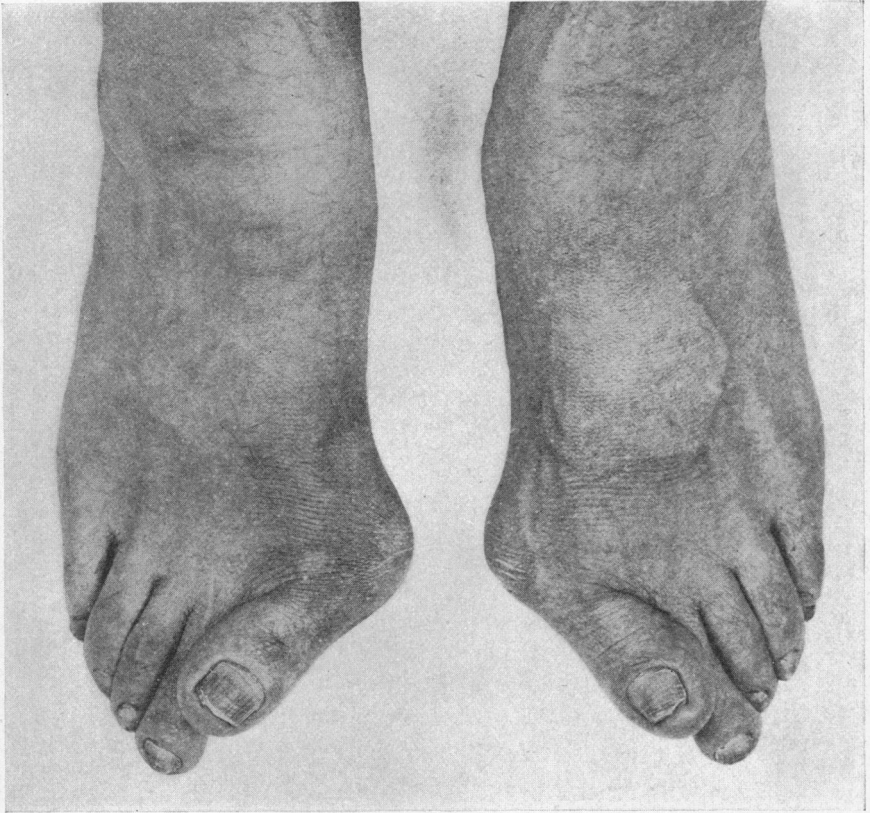
OF ROCHESTER, MINN.

THE discomfort suffered by patients afflicted with bunions is so far in excess of the apparent simplicity of the malady that the disease has come to be a subject well worthy of consideration from a surgical point of view. The condition is usually associated with hallux valgus and is attributed to various causes; the principal one being the wearing of pointed, short and tight shoes. Arthritis and gout may be contributing factors in some cases. From the examination of many patients with this trouble, it appears that the peculiar shape of some feet renders them liable to this deformity. The primitive foot was probably used for grasping objects, the great toe being situated farther back, somewhat like, but less marked than the thumb on the hand, and as is now seen in some of the lower animals.

Confinement of the foot incident to civilization, has possibly tended to the advanced position of the great toe, though many feet still present the short great toe with the wide foot in which the second and often the middle toe is the longer. Such feet rarely have the deformity "hallux valgus," although some slight bunion may be present, and this regardless of the kind of shoe worn.

The characteristic of the foot with tendency to bunion is, that the great toe when straight is from one-fourth to one-half inch longer than the second toe. This type of foot may remain a perfect foot through life but should it become confined in a pointed-toe, narrow, and especially a short shoe, the leverage action against the inner side of the great toe develops hallux valgus with true bony growth on the inner side of the head of the metatarsal bone which becomes covered by a bursal layer. This area becomes most painful to pressure and is liable to special attacks of inflammation. The tendon of the

FIG. 1.



Hallux valgus deformity as shown by photograph.

FIG. 2.



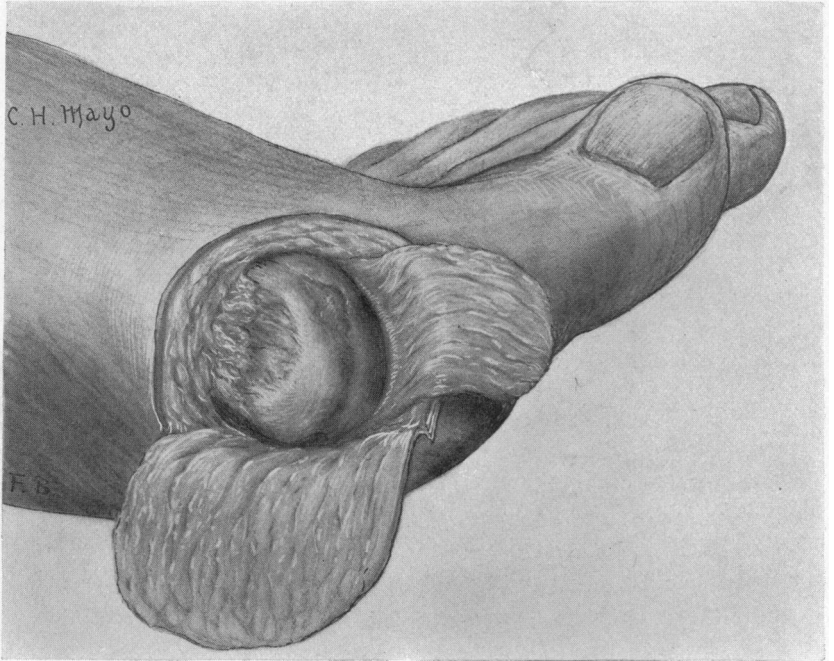
Deformity as shown by radiograph

FIG. 3.



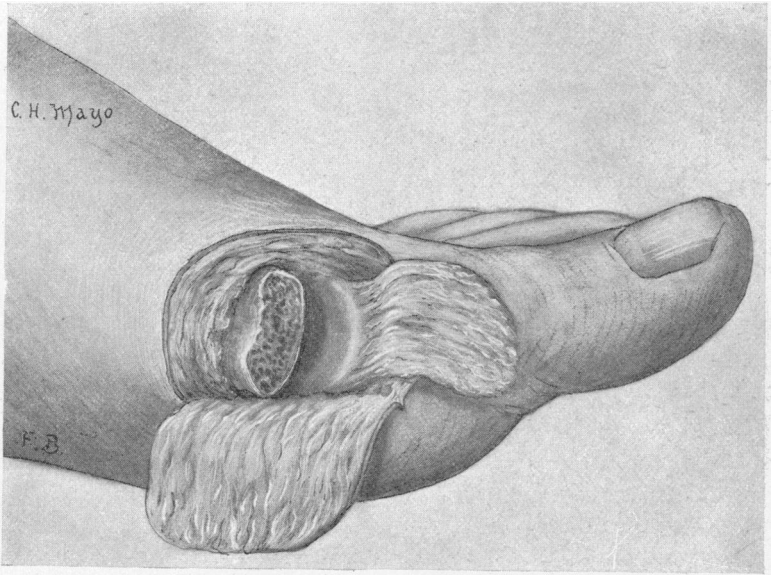
Radiograph of result after nine months

FIG. 4.



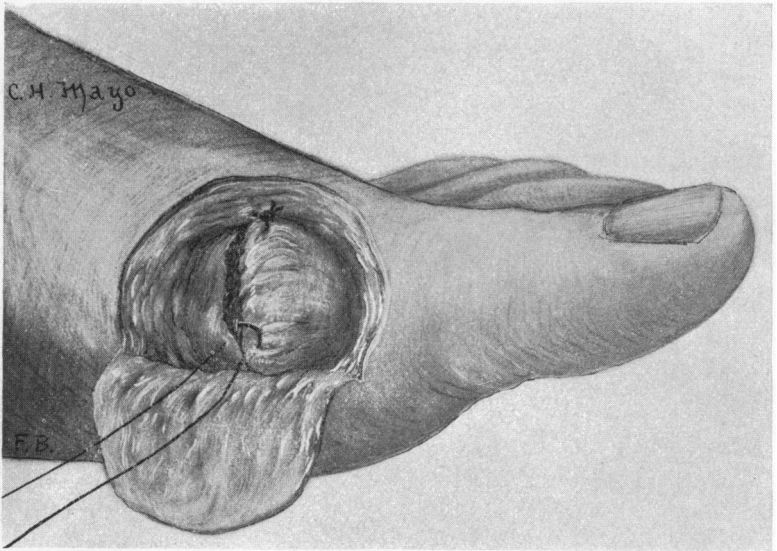
Showing bony deformity

FIG. 5.



Bone section ready for insertion of bursa.

FIG 6



Suturing of bursa to develop joint.

extensor proprius pollicis becomes displaced to the outer side of the joint area, and with the angulation of the toe its sheath becomes a pulley which soon gives way to tension, after which the tendon acts to still further increase the deformity.

Many patients have the trouble in so slight a degree that proper shoe-fitting will relieve them. Some secure comfort by wearing special appliances for supporting the toe or protecting the bunion.

Several operations are recommended for the cure of hallux valgus. Resection of the metatarsophalangeal joint is often practiced; also a wedge-shaped or simple osteotomy of the metatarsal bone, which will relieve some cases but does not narrow the foot or remove the bunion, if it is present.

It is also recommended by some operators, to remove the head of the metatarsal, and, to avoid the scar about the inner side of the joint, their incision is made between the first and second toes.

For a number of years we have practiced the following method in operating upon patients afflicted with this trouble and the regularity of its success leads us to present the technic of the method.

Operation.—A curved incision is made base down over the inner side of the metatarsophalangeal joint, the skin being lifted in the flap which is separated from the bursa. A curved incision “horse-shoe” is now made around the bursa with its base forward left attached to the base of the first phalanx, its inner surface being synovial membrane and continuous with the anterior surface of the joint.

The head of the metatarsal bone is then removed with heavy forceps, the section also removing two-thirds of the anterior portion of the bony hypertrophy on the inner side. The remainder of this projecting bone is cut away to the level of the shaft of the metatarsal. The cut end of the metatarsal bone is now rendered as smooth as possible by rongeur forceps and the bursal flap turned in to the joint area in front of the bone, where it is held in place by one or two catgut sutures. We thus utilize an already formed bursa to secure and main-

tain a movable joint which works in a movable splint,—the shoe,—and thereby secure an immediate result, which is obtained with difficulty in other joints by transplanting fatty tissue into the joint area to prevent bony union; an operation made familiar by the efforts of Dr. J. B. Murphy, who has demonstrated its great value in certain cases where the joints have become fixed by injury, disease, or operation. But in these cases, there being no natural fixed support like the shoe, it is necessary to use apparatus to limit and direct the motion. In some cases the tendon and sheath of the extensor proprius pollicis is best displaced by suture to the inner side of the mid-line of the toe.

Provision is made for drainage by a punctured incision in the base of the skin flap in which is inserted a doubled catgut strand. The skin incision is now sutured in place with horse-hair or catgut. The dressing is a pad of gauze wet in 70 per cent. alcohol, placed between the great and second toes. The anterior portion of the foot is covered with a dressing which is moistened with the same solution at intervals during the first few days.

With ordinary care in protecting the wound these patients are often much better able to go about within two weeks than they were before the operation. It frequently occurs that they are not even kept in the hospital during convalescence.

The motion becomes nearly perfect. The great toe is shortened to a reasonable degree, somewhat narrowing the foot at its widest line; a factor of importance in the prevention of recurrence. The bearing surface for support is excellent as the under side of the joint floor is not disturbed, and the cushion beneath with its sesamoid bones is left intact.

Theoretically it could be said, that the scar is badly placed and would be subject to pressure from the shoe. Practically this is not true, as we have found from operating upon 65 cases during the past eight years according to this method.