

# THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,  
CRITICISM AND NEWS.

## Original Communications.

### FLATFOOT: ITS DIAGNOSIS AND TREATMENT.

BY W. W. BREMNER, M.D.,

Late Assistant Surgeon to New York Hospital for Ruptured and Crippled. Orthopedic Surgeon to the Toronto Infants' Home.

Flatfoot is a breaking down of the normal arch of the foot, more or less pronounced according to the severity of the case. It may be either congenital or acquired.

The acquired form is that which is most frequently seen; it may be caused by rickets, prolonged standing (static), paralysis or injury.

This affection is much more common than is usually supposed, about two hundred cases are seen annually at the New York Hospital for the Ruptured and Crippled, and is often diagnosed as rheumatism or chronic sprain, and treated with various liniments and lotions, of course, without beneficial effect. Anatomically it is a dislocation outward, more or less pronounced, of the anterior part of the foot at the medio-tarsal joint.

In a normal foot, a line drawn down the front of the tibia falls on the second toe. In flatfoot, this line falls within the great toe. The ligaments connecting the os calcis, astragalus and scaphoid are put on the stretch, also the tendons of the tibialis anticus and posticus. In very severe cases the scaphoid is almost completely dislocated outward.

*Symptoms.*—There are certain symptoms common to almost every case of flatfoot. The patient complains of weakness and discomfort in walking, of great fatigue, and often intense pain in the foot after prolonged standing. The gait is awkward, and often there is a limp. The feet are generally everted in walking and standing. On examination, we find that the front of the foot is

turned out in relation to the leg. There is often swelling of the dorsum of the foot, and in severe cases great resistance to abduction and extension; (this symptom may be absent in commencing cases, and yet there may be very great pain), in fact, all the motions of the foot and ankle are often more or less restricted. The average amount of flexion present in the ankle-joint is about 70°, and of extension 140°. Adduction can usually be made until the sole of the foot makes an angle with the floor of from 40° to 50°.

Patients should be examined carefully as to these motions. It will usually be found that they are unable to raise the inner border of the foot at all, while the adductors, the peronei, and extensor longus digitorum are in a state of chronic spasm.

These patent signs are only present in the more severe cases, but in every case there are points of tenderness, which are characteristic of this disease. There is one over the astragalo-scaphoid articulation at the inner border of the foot. One in front of the internal malleolus, and also at the base of the first and fifth metatarsal bones. The one at the astragalo-scaphoid is always present. There are other painful points not so constantly present; one is in front of the external malleolus. These points are often extremely sensitive to either pressure or weight bearing. In some acute cases there is heat, redness and swelling, closely simulating rheumatism; the pain is often most severe in cases where there is very little actual flattening of the arch, while in some advanced cases of long standing pain may be almost absent. It will be seen from the foregoing description, that the muscular balance of the foot is lost. The adductor muscles on which the strength and elasticity of the foot chiefly depend, being strained and their power lost.

*Treatment.*—The treatment must be directed to overcome the state of affairs we find present. When there is not much deformity and spasm present, it is often sufficient to bandage the foot well, and to use a light steel foot plate, made from a plaster cast, taken while the foot is held in as nearly a correct position as possible. This is the method recommended by Dr. Whitman, of New York, whom I had the pleasure of assisting in many of these cases. Where there is considerable deformity and spasm it is necessary to etherize the patient and replace the bones in

\*Read before the Brant County Medical Association.