

## THE CARE OF THE FEET.

A LECTURE DELIVERED AT THE BRITISH COLLEGE OF NURSES BY F. P. FITZGERALD, M.B., F.R.C.S.I.

(Concluded from page 95.)

### Tender Heels.

Continuing, Mr. FitzGerald said;

*Tender heels* are a fairly common ailment. There are two types:

(1) In people with high arches, where the bearing surface of the heel is therefore limited, a tender area forms over the lower surface of the posterior part of the os calcis. It is sometimes spoken of as "policeman's heel."

It is due to a lack of conformity between the shape of the heel and the sole of the shoe—the heel is convex and the sole, usually a new one, has a dead flat surface so that the bony, pointed processes of the os calcis bear on this hard, flat surface, with a resulting contusion at every step.

*Treatment* is to fit the heel with a sponge rubber insole, or have the sole of the shoe altered to fit the heel. The sponge rubber usually gives instant relief.

(2) In cases where there is a definite abnormality of the underlying bone. This usually takes the form of a bony outgrowth or spur growing forwards and downwards from the under surface of the os calcis. These spurs can and do exist without causing any trouble whatever. It is quite common to X-ray both heels and find spurs in both but with only one causing any symptoms. As is quite obvious, if the patient were to jump heavily on to his feet he is quite liable to injure or fracture such a spur. *Treatment* is conservative and operative:

It is worth while when these patients first come to try them out with a sponge rubber insole, as before, or a pad under the heel with an area cut out over the spur, or with a metal insole cupped to take the spur area. If this fails then the spur must be removed by a small operation.

*Painful heels* also occur on beginning to walk after a long illness, when there is a diminution in the thickness of the heel pad of fat, so that walking causes a periostitis of the os calcis. In *Osteomyelitis*, *Tuberculosis*, or *New Growths* of the os calcis the heel may be acutely painful.

### Exostosis of the Base of the First Metatarsal.

A matter of small moment which numbers of people complain of "in case it may be serious"—as they say—is a small exostosis of the base of the first metatarsal. Normally everyone has got this, but often, owing to the rubbing of lacing or strap of the shoe, it becomes red and sore. It is not serious, and can be cured by wearing shoes that do not press at this point, unless it is *very* large, when it must be excised.

### Chilblains.

Before discussing these I must remind you of the manner in which the arteries gradually become smaller towards the periphery of the body, until eventually they reach the small vessels, the arterioles, which are controlled by the sympathetic nervous system, and which end in tiny vessels, the capillaries, which have no nerve supply at all.

In certain people cold causes a strong constriction of the arterioles, so that no blood can pass to the capillaries. The blood in these small terminal vessels therefore stagnates, and waste bodies escape which partially paralyse the walls of the capillaries. Now, when the part becomes warm again the arterioles dilate, and the semi-paralysed capillaries allow the serum to escape and flood the tissues, causing a local swelling and irritation of the part. This is known as a Chilblain.

*Prevention.* Keep the extremities warm.

*Treatment.* In mild cases warmth and faradic foot baths sometimes help; while the administration of Calcium Lactate, in large doses, for a long time may help. In very

severe cases an operation which cuts the nerve supply to the arterioles may be performed.

### Complications.

(1) Breakdown due to scratching, or a necrosis due to the waste bodies and pressure of fluid.

(2) Sepsis.

HYPERIDROSIS, or increased activity of the sweat glands of the feet, varies in different people. It depends on the sympathetic nervous system, and many theories have been put forward to account for it. All the endocrines have been blamed in turn. The real cause is still unknown.

### Treatment.

(1) Spirit, powder, and astringent lotions, Potassium Permanganate baths.

(2) Open shoes and open wove stockings.

(3) An operation on the sympathetic nervous system in very severe cases.

EPIDERMOPHYTOSIS, a form of ringworm, does not come within the province of the orthopaedic surgeon. It is a skin disease, and quite a common one, which is very contagious. It is a complaint that every institution should be on its guard against. It begins usually as a small patch of irritation anywhere on the foot, usually between the toes, the patch becomes red and scaly and tender, and, if untreated, may spread over both feet. Usually it is spread by infection from using the same bath or towels as others; and in America it became such a plague that nowadays in many institutions a foot bath of Potassium Permanganate is provided to dip the feet in on leaving the bath.

I only mention it because a number of people come to the orthopaedic surgeon instead of the dermatologist suffering with it, and also to remind you of the dangers of contagion.

Now we come to some of the more serious ailments, and leading these must be placed the condition commonly known as

### Flat Feet.

It is well to say at the outset that with regard to this complaint there are two diametrically opposed schools of thought:—

1. Those who say that the normal foot is freely movable.

2. Those who say that the normal foot is semi-stiff.

With regard to the first group, it should be pointed out that a low arched or a flat foot is not necessarily a painful foot; it may be very useful indeed. The negro foot is much flatter than that of the white races; and again we all know that that class of people who use their feet extremely vigorously—ballet dancers—have the flattest of feet, but they are extremely mobile. They have, in fact, achieved the height of foot perfection according to the sponsors of the mobile theory. Their feet are as mobile as our hands, and we can flatten or arch our hands at will. With this ideal in mind, it is easy to understand the rationale of the treatment adopted by this school of thought, which is, shortly, mobilisation; while those who regard the foot as a semi-stiff structure naturally aim at resting it.

Let us take an example of the average semi-stiff foot, which the large majority of people possess. A girl comes from her home, where she has been leading a comfortable, sedentary life, to take up nursing. She has to spend long hours on her feet, the muscles which help to maintain the position of her feet become exhausted, and eventually fail to maintain their position, the bony structures sag, the ligaments which bind the bones together have to take the strain and become stretched, and may even have a few fibres torn. These tears join up by fibrous tissue repair, thus causing an adhesion, and every time this adhesion becomes stretched, it causes pain, which is the condition known as *foot-strain*.

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