

severe cases died. Having seen a paper on the treatment of diphtherite, recommending in strong terms the advantages of chlorate of potass, with powdered gum guaiacum, in that disease, I was induced at once to try their efficacy; and I must admit that I quite agree in the advantages of the remedy given in doses of from three to twenty grains each, in proportion to the age of the patient and the severity of the case. A gargle was employed of a solution of chlorate of soda or zinc, which was also used as a lotion for the eyes, ears, and nose, when the discharge from these parts became offensive. An early emetic was given with advantage; and hot vinegar and bran poultices frequently renewed to the throat externally appeared to afford considerable relief. Where this plan was early adopted and properly carried out, I did not see a fatal case; but there is a difficulty in the treatment of children and infants where nauseous medicines are to be given and gargles used. A generous diet was allowed, and wine and brandy were given in full quantities.

This disease appears to differ from the diphtherite which I see described in some districts, inasmuch as the air-passages have not been attacked in the cases which I have witnessed. In two patients there was a slight croupy sound emitted, but it quickly subsided, and the patients recovered. The type which I have witnessed appears to have confined itself to the fauces, palate, tonsils, upper part of the œsophagus, and the mucous membranes of the nose, eyes, and ears; but I have no doubt the same atmospheric poison has been the exciting cause, varying in effect most probably from local influences.

The first place in Devonshire where, I heard, the throat disease prevailed, was Plymouth. It has subsequently appeared to traverse the whole of Cornwall, coming round by the coast into this the northern part of Devon, producing more fatal results in one place than another. For instance, I was told by a medical man of Launceston, that of those who were attacked with diphtherite, there had been a mortality in that district at the rate of 70 per cent.

At the time the disease prevailed with us in its formidable character, there were many who were attacked in a milder way. In these cases, the chlorate of potass and guaiacum appeared to exercise a specific effect.

Whilst this disease reigned, scarlet fever broke out amongst us. I remarked at the time, that if the two diseases blended, we should have scarlet fever of a most fatal character. It was not long before my fears were verified; for many children and grown persons sickened of scarlatina, and died in a few days, some in a few hours, having the same thick offensive discharges which I have described above. Not a few had malignant scarlet fever quickly established, and death was speedy. Amongst the cases that lingered, fifty-six terminated in abscess of the neck. In four of these, the vessels of the neck became ulcerated; three died a lingering death by a gradual bleeding; and one died almost suddenly, from a large vessel giving way. These cases were most distressing; nothing could be done, as the parts were so diseased. It appeared in every instance that it was *venous blood* which escaped. Sixty terminated in dropsical swellings of the hands, arms, and legs: these cases were treated either with brisk purgatives, or diuretics with digitalis, as the case might be; whilst six had sudden effusion on vital organs, and died almost without warning. One remarkable case of general dropsy may be worthy of record. A boy, aged 12, appeared to pass the scarlatina well; he subsequently exposed himself to cold winds. I was sent for when general dropsy had established itself. The stomach was so irritable that it would retain nothing. In a few days, the boy had swollen to an enormous size. Both feet were punctured at the most depending part; one gallon of fluid was discharged in a few hours. It went on discharging for several days. With the assistance of purgatives and good diet, the boy has recovered. In thirty cases, after scarlet fever had subsided, a secondary fever set in, the symptoms of which were almost without variation; viz., glazy red tongue; dry skin; quick small pulse; constant and *very urgent sickness*, throwing off a thin green acrid secretion; great drowsiness; dilated pupil; with considerable prostration. In this form of disease, however, I did not lose a patient. My treatment was, two grains of calomel placed on the tongue twice a day, and a mixture containing carbonate of magnesia and hydrocyanic acid, until the sickness subsided. Effervescent draughts appeared to add to the sickness. In addition to medical treatment, I ordered nutritious injections to be frequently thrown up the rectum.

My treatment of simple scarlet fever consisted of leeching the temples, if the head symptoms were severe; cold sponging to the surface; an early emetic; open air in the beginning;

salines; in some cases I gave ammonia with advantage, but in all cases which partook of diphtherite or throat disease I found chlorate of potass and guaiacum useful.

It may not be uninteresting to give a statistical account of the number of cases I attended in each form of epidemic, and the different results.

	Cases.	Deaths.	Recoveries.
Epidemic fever . . . .	130	14	116
Fever with throat disease . . . .	66	8	58
Scarlet fever . . . .	360	33	327
Total . . . .	586	55	531

Deaths from fever in seven months . . . .	96
Average number of deaths in a year from all causes . . . .	114
Population last census (1851) . . . .	5754

I cannot bring this paper to a close without some few remarks on these epidemics, the character of which has been previously unknown to us, but which have now visited us so severely. The town has ever been considered most healthy, the amount of mortality being less, by the Registrar-General's Report, than almost any town in the kingdom. Typhoid or typhus fever are of rare occurrence here. Still a succession of atmospheric changes appear to have taken place, each change bringing with it a subtle poison, which has had its effect on the human frame, producing disease which has varied in type, it may be, from peculiar and local causes. With us the first epidemic, which greatly resembled what we read of the Lisbon fever, as well as the cholera of 1854, selected for its victims those of the lower orders with whom the drainage, supply of water, ventilation, and supply of food, were defective; whilst the poison which generated scarlet fever was diffused, as it generally is, over the whole district; but I believe it will be admitted that its malignancy and fatal character, both in town and country, were greatly aggravated by filth and bad drainage. To meet these evils of the present day, it is the duty of every one to lend a helping hand in correcting them by means of a good and substantial sanitary reform; but this can never be effected without a judicious supervision by the Government, in order to counteract the local interests that must otherwise prevail.

## ON DISEASES OF JOINTS.

By HOLMES COOTE, Esq., F.R.S.C., Assistant-Surgeon to St. Bartholomew's Hospital, and to the Royal Orthopædic Hospital, etc.

### VI. THE ANKLE-JOINT.

CONTRACTION of the heel, talipes equinus, is produced by a variety of causes, and occurs at any period of life. First, I will direct attention to those cases in which the deformity is the result of accident.

CASE I. I was requested on November 10th, 1857, to examine the right foot of a gentleman, who five weeks previously had fractured the fibula by a fall. He had been under proper treatment, and the broken bone was firmly united; but he was unable to bring the heel to the ground. The foot was moveable as far as the tendo Achillis would allow, and there was no great amount of thickening of the soft parts; but the patient was unable to walk, save a few steps at a time with the aid of a stick or crutch, the toes just touching the ground. Now, others had seen this case, and it was surmised that there had been a fracture of the tibia, extending into the joint; but careful examination showed that the change consisted solely in an increasing contraction of the muscles of the calf and of the peronei, by which the foot was thrown into that position called talipes equino-valgus, namely, pointing of the toe downwards, with slight eversion of the foot. The application of a Scarpa's shoe enabled me, without division of tendons, to bring the parts to their proper bearing; and early in December this gentleman was able to put the foot well on the ground and walk about with comparative ease. Not having lately heard from him, I have reason to believe he continues well.

It does not follow that time will rectify this state of things. On March 29th, I assisted Mr. Tamplin in an operation on the foot of a lady, who two years and a half ago had fractured both bones of the left leg. Perfect union had taken place, but she had never from that time been able to bring the heel to the ground, and had in consequence been entirely precluded from taking exercise. The loss was to her the more serious, as she was a person of remarkably active habits. No relief had been

afforded by any course hitherto recommended. In this case the tendo Achillis was divided, and the foot is rapidly coming into position.

Some of these cases come under the head of partial dislocation of the foot backwards, combined with fracture of the bones of the leg; and they have been recognised by Dupuytren, who recommended the application of an instrument in some respects resembling those now in use for such an accident. The true position of the bones was illustrated by a case which happened many years ago in St. Bartholomew's Hospital, of which the following are the particulars. A middle-aged woman was admitted in 1837 under Mr. Lawrence, into Faith Ward, with fracture and great swelling of the leg, following a fall. There was detected, upon examination, partial dislocation of the tibia forwards, with fracture of the fibula. Proper means were adopted to subdue the swelling, and then an effort was made to bring the bones to their proper relations; but they were found to be immovable. Subsequently an attack of erysipelas supervened, and the patient died. There was found, on the dissection of the limb, fracture of the fibula, about three inches from the lower extremity; fracture of the inner malleolus, and dislocation of the foot backwards, so that the articular extremity of the tibia rested upon the front of the astragalus and on the os naviculare.

In more severe cases, I have seen the tibia resting upon the os naviculare and the internal cuneiform bones.

Talipes equinus ensues from disease. There is such a case at the present time in St. Bartholomew's Hospital.

CASE II. Elizabeth R., aged 20, a healthy young woman, was in St. Bartholomew's Hospital last September with phlegmoneous erysipelas of the right foot. After the disease had subsided, it was found that the tendo Achillis had become so contracted that the foot and toes were kept in permanent extension. After an interval of three months, she made up her mind, the limb being useless, to have that done which from the first was necessary—namely, the subcutaneous division of the tendo Achillis, an operation which I performed in January. The foot is now flat upon the ground, and the surrounding swelling has in very great measure subsided. The case is now going on favourably.

The most striking cases of this deformity commence in infancy, when, from some unknown cause, the muscles which oppose the great muscles of the calf become partially or completely paralysed. The changes which ensue in the limb are remarkable, as will be seen by the following notices of preparations; and it must be remembered that whenever there is loss of nervous power, the nutrition is impaired, the muscles waste, and, in the event of the patient arriving at maturity, a remarkable difference in the length of the two limbs ensues.

The museum of St. Bartholomew's Hospital contains a specimen of talipes equinus (Ser. r. A. Prep. 151), presented by Mr. Wormald, of which the following history may be surmised. The patient must have suffered in early life from infantile paralysis. The muscles which extend the right leg and raise the foot lost their power. Then the flexor muscles raised the heel and kept the toes pointed towards the ground. "All the bones of the right lower extremities are atrophied: the prominences on the right os innominatum are less marked, and the iliac fossa is more shallow than the corresponding parts on the left side. The bones of the right thigh and leg are all shorter, less in circumference, softer, and lighter, than those of the left limb. From the hip-joint to the ankle there is a difference of nearly two inches in the length of the limbs." All the tarsal bones are slender, small, and soft. The left foot is directed vertically, the arch of the sole increased by a projection of the posterior part of the os calcis. The weight of the body is transmitted to the front part of the foot by the astragalo-scapoid and calcaneo-cuboid articulation. The ground was touched by the distal extremities of the metatarsal bones; the phalangi having acquired for themselves new articulating surfaces on that which, in the usual position of the foot, would have been called their dorsal aspect, here rendered anterior.

Dittel (l. c. Jahrg. 7, Heft. 6, s. 440), in describing the dissection of a case of pes equinus, observes: new articulating surfaces were found, 1. On the posterior border of the articulating surface of the tibia (partly convex and covered with a fibro-cartilaginous layer), articulating with the posterior border of the upper articulating surface of the os calcis. 2. A similar one at the posterior border of the malleolus externus, also articulating with the os calcis. 3. A similar one on the posterior part of the body of the astragalus. 4. On the upper surface of the distal extremities of all the metatarsal bones. The proper fibrous capsule was continued over both the normal and the

additional articulating surface, being more capacious than natural. Two-thirds of the articulating surface of the head of the astragalus were exposed, denuded of cartilage, and covered with a fine fibrous membrane.

Chassaignac (*Archiv. Gén. de Méd.* le série iv. 1834, p. 210) laid before the Anatomical Society of Paris a preparation of what he presumed to be an incomplete luxation of the astragalus; but it was more probably a specimen of pes equinus, as Gurlt remarks in his work on the "Joints". The whole lower extremity was short through atrophy of the femur (?). The astragalus corresponded with the tibia by the posterior half of its articulating surface; the whole anterior part, which was covered by a very resistant fibrous tissue, exhibited some remains of articular cartilage. The shallow fossa behind the articulating surface of the astragalus corresponded with the articular extremity of the tibia; on the other side, the head of the astragalus in its articulation with the os scaphoides was incompletely dislocated in its anterior part. Moreover, this head was covered anteriorly by a newly formed process, which projected over the dorsum of the foot. It was remarkable that, through this half-dislocation, the os calcis and the lower extremity of the tibia came into contact in two situations: 1. Posteriorly by means of a newly formed articulating surface, which was quite distinct from the astragaloid surface of the os calcis and lay behind it; 2. Externally by means of the external surface of the os calcis and the most prominent part of the external malleolus. There was here no distinct articulating surface.

"Pure talipes equinus", according to Mr. Tamplin (*On Deformities*, p. 21), "is not congenital. The causes of the non-congenital deformity are numerous. The irritation of teething, worms, any derangement of the nervous system, wounds in the calf, rheumatism, scrofulous disease in the ankle-joint, or in the substance or tendon of the gastrocnemius muscle. Not unfrequently, however, this deformity arises spontaneously.

[To be continued.]

#### CASE OF PECULIAR THROAT AFFECTION; WITH REMARKS.

By C. HANDFIELD JONES, M.B., F.R.S., Physician to St. Mary's Hospital.

MARY B., aged 67, on December 14th, 1857, had been ill six months. She was of sallow aspect. She complained of feeling as if she should be choked from a sensation in the throat, and referred the uneasiness to the situation of the hyoid bone. At times she had dysphagia; she was always "hacking", and phlegm kept rising. There was not much cough. The tongue was clean; the appetite very good; the bowels were regular; the urine pale. She had nausea and retching of a morning, and bitter taste. Examination of the throat inside and outside showed nothing abnormal; the top of the epiglottis could be reached with the finger, and seemed healthy. An œsophagus bougie was passed easily down to the stomach. She stated that she often suffered from frontal headache, which "took her sight away" for the time. The throat sensation, at a somewhat later date, was described as "heat and burning". The staple of the treatment employed was iodide of potassium, bark, and iron and quinine. Gentle alterant pills were given, and one blister was applied to the lower part of the front of the neck. She improved pretty steadily, and was discharged February 11th, recovered.

REMARKS. A few other cases of similar kind have occurred in my practice, and have been all treated in much the same way. In one, there was a frequently recurring impulse to swallow, but the absence of saliva made it ineffectual and painful. In another, there was the same abnormal sensation, but the flow of saliva was excessive. In a third, the sensation was more suffocative, and attended with some soreness, and alternated remarkably with other neuralgia. I believe the disorder is one of the local nerves, and belongs to this large class which may be correctly designated as rheumatoid neuralgia, the morbid action in some cases approximating closer to rheumatism, in others to pure neuralgia. All the cases I have seen have occurred in females beyond the age of fifty, except one which was in a male aged forty. I need hardly say they were not instances of globus hystericus. The affection is very wearying and depressing, and likely to be very persistent, if not recognised and treated properly. I do not know that it has been particularly described before.