proposed in a brief note¹ the term "hallux rigidus" for this condition. The opinions which I then expressed were contrary to those of other correspondents at the time; but as the nomenclature and pathology which I then suggested have gradually found their way, in a more or less mutilated form, into common use, it may perhaps be as well to shortly repeat my propositions, though it will be hardly possible in so short a paper to prove my contentions.

1. Hallux rigidus, properly so-called, consists of an inability to fully dorsiflex the great toe on its metatarsal bone. In health it can be dorsiflexed to a right angle; any limitation of this range of movement must be considered as including the case in the class, but it is only in aggravated cases where dorsiflexion is entirely, or almost entirely, abolished that discomfort is caused and the surgeon consulted. 2. Hallux rigidus is never caused by flat-foot alone, though always associated with it. It occurs in flat-footed patients who wear such boots as prevent the angle of 30° (or thereabouts) which normally exists between the first metatarsal bone and the first phalanx, being maintained when the base of the metatarsal passes downwards in the falling of the instep in flat-foot. Strictly speaking, the great toe is not flexed on its metatarsal bone, but the metatarsal is, so to speak, flexed on the great toe; and therefore I objected to the term "hallux flexus," which was proposed by Mr. Davies-Colley, as misleading in pathology. This term should be restricted to those rare cases of pure plantar flexion of the hallux due to contraction of muscles from spinal or other causes and unassociated with flat-foot. I have seen two such cases, and they were both cured at once by tenotomy. 3. That hallux rigidus is never caused by flat-foot alone is proved by the fact that negroes, who are very commonly flat-footed, never suffer from hallux rigidus unless they wear boots. Their unrestrained big toes turn upwards when the instep falls and the normal angle of 30° above mentioned is preserved. The clodhopper's boot, the French sabot, and other varieties of boot are, by a sensible arrangement dictated by experience, purposely made so as to allow of this necessary dorsiflexion of the great toe; and therefore in people who wear such boots the condition is not met with. The ordinary strong boot of the town boy is the one which, in the presence of flat-foot, causes the disease. 4. While, as in other painful joints, a certain varying amount of the stiffness may be due to muscular spasm (as can be verified if the patient be anæsthetised), the essential reason for the loss of dorsiflexion is contraction of the inferior portions of the lateral ligaments of the joint. This portion of the ligament is slackened when (the toe being fixed by the boot) the instep falls. It consequently in time becomes contracted; whereas the superior ligamentous structures are put on the stretch, sometimes to such an extent as to cause pain. The upper part of the joint surface on the dorsal aspect of the metatarsal head no longer takes part in the work of the joint; it consequently becomes altered, eroded, lipped, &c., as is often seen in joints elsewhere under similar conditions. The glenoid or plantar ligament can have little to do with the matter, for it is fibro-cartilaginous and its fibres run transversely; therefore its power of contraction must be trifling. 5. When the instep falls of course the foot lengthens along its inner margin. The big toe is thus thrust forward (constituting the "abnormally long great toe" of some writers) and impinges at every step against the end of the boot. In this way additional irritation is probably caused in the joint, synovitis follows, adhesions form, and the stiffness is increased. 6. The condition is frequently bilateral; it occurs generally in young males from twelve to twenty who have a lot of standing or running about to do, such as errand boys; in other words, in exactly the same class in which flat-foot is so common. It occurs occasionally, but not nearly so often, in females. It is naturally associated with the same want of muscular and vascular tone which one finds in flat-foot. 7. Mr. Mayo Collier says the condition is a comparatively rare one. I should call it a very common one. It can be frequently seen in any of our large infirmary out-patient rooms, and I have no hesitation in saying that I have seen scores of cases in the last twenty years. Perhaps this may be due to the fact, which may surprise some of my readers, that the children of the lowest class in the slums of Edinburgh, even in the present year of grace, generally run about without boots; and though I am well aware that on theoretical grounds it may be objected that the free play of the bare foot ought to prevent rather than

cause flat-foot, as a matter of daily experience I know that it is far otherwise. And how does the theoretical objector propose to explain the flat-footed negro? 8. While there is no reason why gout, rheumatism, rheumatoid arthritis, traumatism, &c., should not occasionally cause stiffness in this joint as in others, these conditions have no primary causative relation whatever to true hallux rigidus.

Treatment.—In all but the severest and most neglected cases all that is required is to stretch the shortened ligaments and break down any adhesions, if necessary under an anæsthetic; then keep up the gained power of dorsiflexion by daily passive movement; and firm pressure will be required for this purpose to overcome muscular spasm in the flexors. In addition, the flat-foot must be suitably treated by tiptoe exercises, massage to the calf muscles, supports, &c.; but into this part of the subject I must not enter at present more fully. I have found this treatment sufficient after a few days in almost every case to enable the patient who, it may be, limped into hospital in great pain, to walk any distance in absolute comfort. There are a few old-standing cases with firmer ankylosis, where removal of the base of the first phalanx may be necessary. This proceeding (recommended by Mr. Davies-Colley in 1887) is preferable, in my opinion, to interference with the head of the metatarsal bone, as being less likely to interfere with the tripod strength of the foot. I have done this operation in one case with a perfect result. Where such an operation is not permitted, and the case is beyond the reach of the milder means detailed above, the patient can be made to walk comfortably, though with a somewhat awkward gait, by adopting Professor Chiene's plan of inserting a rigid metal plate in the whole length of the sole of the boot, so as to prevent any possible strain on adhesions or shortened ligaments in attempts at dorsiflexion in walking. This treatment is of course merely palliative, as it perpetuates and does not cure the stiffness, though it certainly entirely removes the pain in walking as long as the plates are worn.

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THE RADICAL TREATMENT OF LUPUS.¹

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AFTER considering the pathology of lupus and its behaviour after all other methods of treatment the conclusion must be arrived at that a complete and free excision, involving the whole thickness of the skin, is the ideal treatment. Until recently excision was only possible in the case of small patches of the disease where the edges could be brought together with sutures after the operation, for the tediousness of healing by granulation and subsequent cicatricial contraction prevented such treatment for patches of any considerable size. The combination of immediate skin grafting after Thiersch's method with free excision enables the surgeon to radically treat patches of lupus of any size. Small parts of a patch were treated in this way by Professor Thiersch in 1839, but he took five or six sittings to complete the removal of the lupus. I believe that Mr. Watson Cheyne was the first to perform such an operation in this country, and some of the first cases so treated were shown at the Medical Society of London² in March last year by Messrs. Watson Cheyne, Bruce Clarke, and myself. At the meeting of the British Medical Association at Newcastle I communicated a paper on this treatment for lupus,³ and I think that many surgeons have now given it a trial. With regard to the operation itself, one of the most important factors in its success is a very strict attention to antiseptics; this is the only way to ensure the vitality of the extensive skin grafts. The lupoid patch and surrounding skin should be thoroughly disinfected on the day before the operation, and a "packing" of gauze soaked in 1 in 20 carbolic acid solution should be kept on all night. The part from which the grafts are to be taken should be similarly prepared. The patient must be placed under an anæsthetic, and an incision is made down to the subcutaneous fat all round the lupus about a quarter of an inch from its margin. The whole thickness of the

¹ This paper is part of a post-graduate lecture delivered at the West London Hospital.

² THE LANCET, March 18th, 1893.

³ THE LANCET, Aug. 19th, 1893.

skin, together with the subcutaneous fat, is then dissected off, the bleeding points are clamped with pressure forceps, and sponge pressure applied. While the bleeding is being stopped the grafts should be cut; for this purpose I employ a special razor with an extra wide blade, on which a long ribbon-like graft can curl up when cut. The skin over the front of the thigh, which is the preferable part, is held tight by an assistant and the surface moistened with 1 in 4000 mercuric chloride solution while the grafts are cut; the grafts usually measure from 1 in. to 4 in. in length, and about 1 in. in breadth; they include the epidermis, the rete mucosum, and the tips of the papillæ. The grafts are slid off the razor on to the wound or on to the surrounding skin, which has previously been moistened with warm antiseptic solution, and are pushed into position with a probe, care being taken that their edges are uncured and that they overlap the margins of the wound and each other. The wound is dressed with a piece of gauze protective tissue and cyanide gauze; this does not require changing for a week, when in most of the cases the wound is found to be practically healed. The part from which the grafts have been taken is similarly dressed, and being merely an abraded surface heals within ten days without any cicatricial contraction. The following eight cases were treated in this way at the West London Hospital.

CASE 1.—A girl aged nineteen years, with an ulcerated patch of lupus measuring 4 in. by 3 in. on the inner side of the left thigh. This had existed six years. It was freely excised and grafted on Oct. 20th, 1892. Now the new skin is quite supple and there is no recurrence.

CASE 2.—A woman aged thirty-seven years, with a patch of lupus on the right shoulder measuring 6½ in. by 4¾ in. It had existed as long as the patient could remember, and had been treated by scraping, caustics, and salicylic acid plasters. This was completely excised on Dec. 20th, 1892, and grafted; a slight recurrence at one margin appeared six months later, and was excised on Aug. 20th, 1893. She is now able to do her household work, and is pleased to be rid of a disease which had existed thirty years or more.

CASE 3.—A girl aged eighteen years, with a patch of lupus on the left cheek measuring 1½ in. by 2½ in. This had existed fourteen years and had been scraped six times; it was freely excised on April 21st, 1893, and grafted. The scar is now scarcely noticeable and there is no recurrence.

CASE 4.—A girl aged twenty-four years with an ulcerated patch of lupus on the left cheek measuring 3 in. by 2 in. This had existed thirteen years, and had been treated with caustics at intervals for eight years. It was excised on April 24th, 1893, and grafted. She is now quite well.

CASE 5.—A boy aged two years, with a patch of ulcerated lupus on the tip of his nose and with other patches on the arms and thighs. This had existed for one year and nine months; the patch on the nose was excised and grafted on Aug. 22nd, 1893. The scar now cannot be seen and there is no recurrence.

CASE 6.—A boy aged sixteen years, with lupus involving the whole of the right cheek, extending over the bridge of the nose up to the eyelid, and downwards below the angle of the jaw. It measured 5½ in. by 4¾ in. and had existed eleven years. There was another patch of lupus on the right shin, which measured 2½ in. by 2 in. Both patches were freely excised on Dec. 22nd, 1893, and grafted. There is no recurrence, and the only deformity is some retraction of the angle of the mouth.

CASE 7.—A boy aged sixteen years, with lupoid patches on the right shin which had existed two years. This was excised and grafted on March 2nd, 1894. He is now well.

CASE 8.—A boy aged eight years, with two patches of lupus on the face, one below the chin and the other on the right cheek. The patch below the chin had existed four years, that on the cheek for only two years. Both patches were freely excised on March 16th, 1894, and grafted.

The result of these cases is, I think, highly satisfactory, although a slight recurrence had taken place in Case 2, which is explained by the fact that I did not carry my incision far enough away from the margin and so left some doubtful skin. When the grafts do not all "take," the intervening portion heals quickly by granulation, giving rise to a raised cicatrix however, which of course contracts strongly; the scar left after grafting does not show the same tendency to contract, since no granulations are developed in the process of healing (the contraction of a cicatrix being directly dependent on the amount of granulations formed). To illustrate this point I may mention that the movements of the arm

in Case 2 are quite free, and that in Case 6 there is no ectopion, although the whole cheek has been removed. The new skin is unsightly at first, but after a time becomes supple and movable over the deeper tissues; in fact, in some cases I have grafted directly over tendons without impairing their movements. Ordinary sensation quickly becomes established in the new skin, and after a few months it is difficult to find any difference between it and that of the surrounding skin.

Some sections of this new skin formed from Thiersch's grafts have been made for me by Dr. Abraham. They were taken from the patient in Case 2 when a recurrence was removed nine months after the original grafting. While in sections of cicatrices after healing by granulation one sees only layers of squamous epithelium resting on dense fibrous tissue, in sections of skin formed from Thiersch's grafts, on the other hand, there are numerous well-developed papillæ and a true cutis rather rich in cells. The epithelium, too, resembles that of normal skin; numerous vessels were seen in the new cutis, but nerve endings have not been demonstrated. This development of a new cutis is to be accounted for by the ingrafting of the tips of the papillæ with the epidermis, and explains the absence of cicatricial contraction after grafting. I think that all will agree that this method of treating lupus is more successful than the older ones, but time, of course, must elapse before one can say that a case is absolutely satisfactory, yet I am sanguine enough to believe that the treatment will be successful, for it is based on a sound clinical and pathological basis.

Note.—Since writing the above I regret to say that a fresh recurrence has occurred in Case 2, and that, too, in the centre of the cicatrix. At the first operation I noticed that the subcutaneous fat was altered in consistence, so I would suggest that the lupoid tissue had even at that time extended below the part removed. I do not think that the fact of this recurrence should be used as an argument against this method of treatment, but it should induce one to excise the parts more freely. Another *contretemps* has occurred in Case 8, where the lupoid tissue on the chin extended deeply, down to the bone. The cicatrix assumed a keloid condition, and after contracting slightly, became bound down to the bone; this caused eversion of the lip with dribbling of saliva, which, however, has been remedied by the transplantation of a flap of skin beneath the lower lip. This patient, too, returned to hospital with tuberculous tenosynovitis on the dorsum of the foot, which I operated on with a satisfactory result. Instead of the gauze protective tissue which I have used in nearly all the above cases I now propose to use next to the wound some gauze made out of spun glass, which has been supplied by Messrs. F. Walters and Co. I think that the grafts will not adhere to this, and so there will be no risk of detaching them during a dressing; at the same time the gauze, being of loose texture, will allow any blood or discharge to escape into the dressings.

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INTESTINAL OBSTRUCTION, DUE TO FÆCAL ACCUMULATION, ASSOCIATED WITH DISPLACED KIDNEY.

BY WALTER KIDD, M.D., B.S. LOND., M.R.C.S.

THE following cases which have come under my care during the last five years are, I think, worthy of record. They have all presented the characters of attacks of intestinal obstruction, due to fæcal accumulation, and have been found, while recovering, to be associated with a movable or displaced kidney at the seat of obstruction. There cannot be much doubt that in these cases the obstruction and the displaced kidney were related as to cause and effect. It will be seen that in Cases 3 and 4 the subsequent tumours, which assumed the features of displaced and very slightly movable kidney, actually composed the bulk of the original masses found at the commencement of the attack. In Cases 1 and 2 the kidneys were more movable, though not very freely so, and probably led gradually to the arrest of the contents of the bowel by a less direct pressure. In all the cases the patients recovered and presented no signs of malignant disease, Cases 1, 2, and 3 having been watched at intervals from two to five years, and Case 4 for two months after the respective attacks of obstruction. In all of them the accumulation was in the hepatic flexure or the commencement of the transverse colon;