growths in the pelvis. If osteitis deformans be associated with any other disease, it is with sarcoma; and perhaps as no disease at present can be said to be associated with sarcoma, it would put the point more clearly to say that the tissue changes in the bones predisposed the skeleton to new growths. The predisposition is not so local as in the case of pigmented warts, or irritated mucous membrane of the lip; and the right tibia, the bone first affected in this case by tumour, was the least involved in osteitis. There must be a predisposition of bone tissue to sarcoma in every case of osteitis deformans.

The skeleton here figured is a great addition to our Cambridge Museum, and enables the sequel of an interesting case to be studied and recorded.

A NEW DEEP(?) SUTURE FOR LARGE OPERATION WOUNDS

By E. STANMORE BISHOP, F.R.C.S.ENG.,
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DURING the last few years surgical ingenuity has been greatly interested in the question of suturing, chiefly of intestine or of other tubes. It has been almost taken for granted that perfection has been reached in the methods of uniting ordinary wounds, and no alterations of any moment have been proposed in the latter. But the union of large wounds, especially such as are deep, with large flaps separated to some distance, as, for example, after the removal of a large breast with much skin, is scarcely ideal. Too often, although primary union may have been obtained, months afterwards a very unsightly scar is left, not a mere white line, but with numerous similar lines and scars outside and lying at right angles to the main one. The surgeon is usually inclined to look upon these with indifference, they are of such infinitesimal importance beside the difficulties and dangers which he has surmounted; but the patient often regards them from quite another point of view. She is not so keenly alive to the greater risks, since they have been so skilfully evaded that probably she has known nothing of their existence, but she is very wide awake to any disfigurement left, and if such disfigurement can be decreased with safety it is surely worth the surgeon's while to attend to it. This, however, is not the most important consideration. A broad space of raw tissue has to be covered, and by a little manoeuvring, aided possibly by additional incisions and gliding of flaps, this is done. The flaps are held in the place they are to occupy by deep sutures, the tension upon each of which is of a fair amount. Each of these deep sutures penetrates the skin and goes down into the wound, so that when closed, the potential cavity of the wound has passing through it certain linear foreign bodies which communicate with the external surface. Should the tension upon any of these be more than a certain rather indefinable amount, they will cut through the skin towards the wound until such tension is relieved. In any case, but especially if this takes place, there is a possibility of a stitch abscess forming at the point of exit of the thread. Any bacteria or resultant pus has, by way of the suture which penetrates the base of this abscess, a chance of entrance into the main cavity of the wound.

An ideal method of bringing together these deep flaps would, I think, combine the following advantages:

First, and of most importance. Any stitch abscess resulting from its use would have no connection with the deep raw surfaces, nor any chance of infecting them.

Secondly. The pull upon the flaps approximating them would act upon a large portion of the flap, so ensuring (a) accurate adaptation, not merely at the skin line of union, but deeply between the raw surfaces below; (b) decreased chance of any cutting through the skin.

The stitch which is here shown aims at accomplishing these indications, and has been tried sufficiently often and with such good results as I believe to warrant its being brought before the profession for more extended trial.

The drawings show the method of application. A fold of skin is pinched up on one side of the wound at about the line through which an ordinary deep suture would have been passed. A needle, armed with a long thread, is passed

through this, then over the wound, and through a similar fold of skin on the opposite side; it is then brought back again in a reverse manner through the last fold, over the wound again, and through the first fold, leaving a loop on the far side and two free threads on that nearest. Two or

Fig. 1.

Fig. 2.

Fig. 3.

more of these loops are placed (Fig. 1). Then a small glass rod, with slightly bulbous and rounded ends, is placed in the loops, which may either simply encircle it or be taken round it once, as in Fig. 2. By drawing upon the four or more threads, the rod will force the further flap bodily towards the centre of the wound. If now a second rod is placed between each of the pairs of loose threads on the near side, and each of these pairs are looped together over it, by pulling on these free ends, the near rod, and by it the near flap is made to approximate the far one, and when these are in apposition, they are kept so by knotting the threads. Fig. 3 shows a wound thus closed by a rod on either side kept in position by five loops so placed. The edges of the wound are then neatly applied to one another, and united by points of suture as may be required. It will be seen that the deep threads, or as they should now rather be called the tension threads, lie entirely outside the wound, which will contain no foreign bodies at all, except the few catgut ligatures which may have been required. Care must be taken not to twist the sutures beneath the rods, otherwise the main advantage of this suture will be lost. This advantage is that no narrow line of suture grips the skin, so as to cut out, inasmuch as the whole thickness of the rod interposes between the point of entrance and exit of the thread, and the pull of the suture is thus no longer upon a thin line of yielding skin, but upon the glass rod, and its force is distributed along the whole length of the rod between any one suture and those on either side of it.

It may be objected that the pressure of these rods will so interfere with the nutrition of the flap that instead of primary union sloughing will occur. Experience of the method does not, however, show that this objection has any practical force, but in any case in which this was to be feared it is well to use several small rods, each acted upon by two sutures only, leaving small spaces between. It will be seen that it is necessary to use two, otherwise the rod may become displaced, and half of its advantage lost, but the rods can be made in all sizes. I usually prefer rods of $1\frac{1}{2}$ to 2 inches in length.

Care should be taken to make the distance between the points of entrance and exit of each of the threads equal to or very slightly greater than the diameter of the rods, so as to

prevent any dragging upon the skin at these points. As the main portion of the threads lie over and at right angles to the line of union, they may be utilised for keeping in position the deeper dressing, which may be passed beneath them, but this is not an essential feature of the method.

A CASE OF HODGKIN'S DISEASE.

By WILLIAM E. L. ALLEN, M.B., C.M.GLAS.,
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A. E., aged three years and a-half, previously healthy, with the exception of a mild attack of scarlet fever followed by measles in October, 1895, was first seen on March 7th, 1896. She was suffering from a scratch by a cat on the ring finger of the right hand, which was very much inflamed and suppurating. About a week later an abscess formed in the right axilla, which when opened discharged a dark brown offensive fluid. This healed under ordinary treatment, but was accompanied by some sloughing. About this time some glands below the left ear became slightly enlarged, but the swelling disappeared on painting with weak iodine liniment.

About the middle of April the cervical and submaxillary glands, axillary and inguinal glands were found to be swollen on both sides. Under iodide of potash internally and iodine externally there was considerable diminution in the size of the cervical glands on the right side, and subsequently slight improvement in those of the left side. None of the glands exceeded the size of an almond, many not being larger than a pea. It was impossible to count them, so many being involved, but all were freely movable—distinct and free from pain. The complexion became very waxy and there was marked leukæmia, the spleen was easily felt about an inch below the ribs, about the size of an orange. There was also considerable enlargement of the liver. The face and body were very much swollen, but there was no pitting on pressure and the swelling was more a puffiness than actual œdema. The bowels and kidneys acted freely. The temperature was slightly above normal, but never more than 102° F., shortly before death. At the beginning of May there was epistaxis, but not severe, though it continued more or less the whole of one day. There were very marked purpuric spots on the arms, legs and lower part of the body, the largest being about the size of a threepenny piece. On May 6th pneumonia set in, which proved fatal on May 10th. Four days before death there was suppuration from the right ear.

This case is interesting owing to the early age of the patient and to its rapid termination, as there was only a period of nine weeks from the first distinct appearance of the complaint—dating back to the first enlargement of the cervical glands—before death took place. It is also interesting on account of the suppuration from the ear, which in this case was a sequel of the complaint and not a cause of it as suggested by Trousseau. Though there is a history of a poisoned (?) wound, it can scarcely be looked upon as a case of septicæmia, but rather as the cause of the scratch taking on an unhealthy action, as the symptoms point conclusively in favour of Hodgkin's disease.

As to treatment, arsenic and phosphorus have been used, but without any marked benefit except in Billroth's case, where arsenic was used. In this case the glands diminished under pot. iodid., but that has been observed under other forms of treatment, shortly before death and apparently independent of treatment. In a future case I should be inclined to give the gland treatment a trial.

A CASE OF HEAT STROKE: HYPERPYREXIA: RECOVERY.

By GERALD SICKEL, SURGEON, R.N.

[Communicated by the DIRECTOR GENERAL, Medical Department, R.N.]

THE following interesting case occurred on board H.M.S. *Gibraltar* after she had been in the Mediterranean just over a month:

On July 13th, when at Palma, in Majorca, at 6 P.M., J. W., an engine-room artificer, aged 27, came down to the sick-bay,

complaining of headache and pains in the legs. His temperature was 100.4°, his tongue slightly furred, he looked pale and ill and was put in a cot in the sick-bay.

He lay there sleeping until 9 P.M. when the sick-bay steward thought he seemed slightly delirious and took his temperature which was 105.2°, shortly afterwards his breathing became stertorous, and he lay comatose with a temperature 109.2°, full rapid pulse, pale face, closed eyes, pupils equal and fixed about half-way between dilatation and contraction: his venous system was engorged, his body dry and felt burning hot: at times he groaned loudly and struggled to get out of bed.

He was bled to 6 oz., but it apparently did him no good, and his breathing becoming rather embarrassed he was given a hypodermic injection of 5 minims of liquor strychninæ; meanwhile a bath was being prepared, into which he was put, the temperature of the water being brought by ice from tepid to about 65° in half an hour. This brought his temperature down to 101.2°, otherwise his condition remained unaltered. At 11.30 P.M., he was given a large soap enema, which emptied the lower bowel of a great deal of feces, in part scybalous. Later his temperature rose to 103.4°, at 12.30, 104.6° and he began to have epileptiform fits, in one of which he bit his tongue: later he had fits every 10 minutes.

At 2 A.M. on July 14th the temperature was 107.8°. He was put in a cold pack and his body rubbed with ice, the temperature came down, till at 5 A.M. it was normal, with pulse 104, respirations 22, he began to grow a little conscious and recognised being called by name. He was sick several times during the night. Later he became fairly conscious and his temperature did not go above 99°.

On July 15th the temperature kept down, but he was sick after everything he ate; he had a very restless night; morphine gr. $\frac{1}{4}$, with atropine gr. $\frac{1}{15}$ did no good. Urine: acid, specific gravity 1024, no albumen.

July 16th, the temperature was 99° and the pulse 76 in the morning. Vomiting had ceased, but he was still very restless; he was not fully conscious but complained of diplopia and difficulty of hearing. Towards evening he became more and more restless and in the end he struggled so violently that he had to be tied down in bed. Morphine, gr. $\frac{1}{2}$, and bromide potassium 3ss did no good. During the ensuing night the temperature went up 102.2°: and he was put in a wet pack.

On July 17th, at 1.35 A.M. he was given 30 grs. of chloral hydrate, after which he had a sound sleep. After he woke his mind was wandering, and he passed urine under him twice, the tongue very dry and furred: with sordes in teeth and lips. He was given another dose (20 grains) of chloral, after which he slept all day, having to be waked to take his food (beef tea and eggs beaten up) which he kept down well. At 9 P.M. the temperature 99.2° the pulse 68 and the respirations 20.

On July 18th, he had had a very good night, but required another 20 grains of chloral in the evening.

From this date he steadily improved until on the 22nd he was allowed to sit up for two hours in the evening.

Until July 19th, he had a decided impediment in his speech, but this then almost entirely disappeared—he had some slight peculiarity of speech before the stroke—and this of course remained. From this date onwards he made an uninterrupted recovery.

An ophthalmoscopic examination was made on July 23rd, there was no optic neuritis, or atrophy, or retinitis.

COMMENTS.—There was nothing very peculiar about the atmospheric conditions on the day of the stroke. The barometer at 4 P.M. was 30.12 in., thermometer 87° in the shade and relative humidity (100-saturation) 52: but we had just come from Malta, where everyone appeared to get "run down." The thermometer night or day hardly ever fell below 80°. From 7 A.M. until 3 P.M. he had been working in the engine-room where the temperature was 100°. About the same time that this man was ill, we had several minor cases of heat stroke, the majority of them among those who worked in the engineers' department.

It is interesting to notice that, as is so often the case, the stroke came on in the comparatively cool evening.

Sir Joseph Fayrer objects to bleeding in these cases as a rule, but in this man the nervous system was so obviously engorged,