

To illustrate the injurious effect of permanent extension, I need only draw attention to cases of fracture of the patella, where the natural result of muscular contraction is the same as that artificially produced in other cases—viz., the separation of the fractured ends; and it is impossible in permanent extension for it to be otherwise. Here, unfortunately, it is opposed to the approximation of the surfaces of the broken bone, and hence the surgeon's difficulty. There he interposes and opposes the approximation, and hence again his difficulty with the same result—viz., retarded union. Now let us see how the surgeon tries to imitate the natural effect of muscular contraction. Having succeeded, though unintentionally, by means of permanent extension in producing a case of retarded union or ununited fracture, he is anxious to re-excite the dormant natural effort, and this he does by rubbing the fractured ends forcibly together, and at the same time adopting such means as he thinks most likely to preserve position, even to the drilling of holes in the shaft of the bone, near the seat of fracture, and driving iron, ivory, or wooden pegs into these holes, and then ties them as closely together as he can in order that the stimulus of the previous friction should not be lost. Whereas, had he only utilised that which he has destroyed—viz., the natural stimulus and retentive tendency of muscular contraction—he would have saved himself all the anxiety, and his patient the endurance of prolonged suffering.

In THE LANCET for the 17th Oct. is a report of a case of ununited fracture treated in the Middlesex Hospital, which admirably illustrates the injurious tendency of extension, and at the same time of improperly constructed forms of apparatus. No less than three different forms of splints, acting on the same principle, were applied in this case with the same unsatisfactory result. It need only be contrasted with cases of a similar nature, treated in the same hospital, under the care of Mr. De Morgan in 1855, upon the principle for which I contend, to establish the correctness of that principle in contradistinction to the method of treatment as therein and generally adopted.

Permanent extension, as applied to fractures, and *extension* also after replacement, should be discarded from the vocabulary of the surgeon, and *retention* substituted for it; and this is of easy accomplishment by properly constructed forms of apparatus.

Having on former occasions, in THE LANCET and other periodicals, described various forms of my apparatus for carrying out the principle above indicated, the chief of which are now in the Museum of the Royal College of Surgeons, I will, on this occasion, describe a ready but effective means by which the principle can be tested, by any surgeon desirous of doing so, at the cost only of a little trouble at first, but which, unlike the ordinary extension apparatus, when once properly adjusted involves no further trouble.

For fractures of the thigh a Liston's long splint, or a piece of deal of length sufficient to reach from about three inches above the spine of the ilium to a little beyond the sole of the foot, and of about three inches wide, will do. Make longitudinal slits into the holes in the upper end of Liston's splint and do the same in the other. Make a pad of the same width, and a little exceeding in length the splint; three or four folds of linen will do. Sew these together, and at the same time, on one side, the whole of its length, pieces of ordinary bandage sufficiently long to reach round the body and limb, and on the other a piece of linen about three times the width of the splint. This is for the purpose of securing the stuffing afterwards described. Let the patient lie on his back, as if erect, the body not inclining to one side more than the other. Place the pad against the limb, and fasten it by means of the bandage, so that it lies closely throughout its whole length. Against the pad lay the splint, and where it touches the limb secure it by means of extra pieces of bandage. Now adjust the perineal band. This must be done with care, as the length when once fixed must not be altered. Fill in now completely, evenly, yet firmly, the interspaces between the body, limb, and splint, with any material at hand which will not readily shift its position, such as rag, paper, tow, hay, straw, &c. Having done this, secure the ends and sides to the splint by means of drawing-pins or tacks. Remove the splint from the side, and secure the pad immovably to it by tying it through and through. Adjust the fracture, and apply the splint in the ordinary way by bandage, which for

security should be tacked to the sides of the splint. By this means the natural form and length of the limb will be preserved; muscular contraction restored in all its energy, not destroyed; and nature thus assisted, not impeded, by art, is enabled to perform her work in the most speedy and perfect manner possible. More than this art cannot achieve.

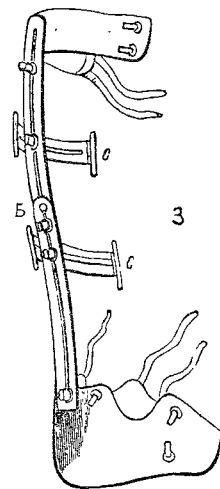
In fractures of the leg, whether simple, compound, or comminuted, a rough-and-ready yet effective apparatus can be contrived as follows:—Take a piece of board half an inch thick and somewhat wider than the limb; scribe the outline of the sound limb upon it, and, by any ready means at hand, pierce holes at equal distances apart along each side parallel to the line, allowing a little space for a pad (if nothing better is at hand, a bit of red-hot iron will do to make the holes); reverse the board and drive pegs of sufficient height into them, and on the underside fasten at each end a semi-circular piece of wood, thus making it a rocking cradle, in order that the limb may be enabled, on lateral movement, to carry the cradle or splint with it. Here again the natural form is restored. In cases of compound fracture, the pegs on either side can be removed and any portion of the limb exposed for dressing.

Having now indicated a means by which, at the cost of a little trouble only, the principle I have advocated for the last three-and-twenty years can be tested, I leave it in the hands of the profession to decide whether it is worthy of consideration or not. I trust that those who do give it a trial will not fail, in the interest both of the profession and of the art and science of surgery, to report their experience.

I must not, however, be misunderstood. Undoubtedly there are many cases treated successfully by the ordinary method, but it is in those cases in which the apparatus approximates most nearly to the natural form of the limb that the best results occur. A straight splint is the proper appliance for a straight limb, and a curved splint for a curved limb; that, in fact, the appliance should assume the natural form of the limb, whatever that form may be, whether by previous adjustment to the sound limb, or by careful adjustment to the injured one at the time of application.

I submit a sketch of an inexpensive apparatus, which, although it has already appeared in THE LANCET, it may not be amiss to reproduce. It is made of iron. The foot and knee pieces are of leather. It has two movable arms for adjustment to the seat of fracture, and a central joint which admits of lateral movement. Its application is as follows: Loosen the screws at the back; place the sound limb on it; regulate the length, and tighten the screws; remove; examine the index at the central joint; mark the deviation from the central line on the opposite side of the line, turn the index to it, and fix the screw; place a pad on the splint, and apply it to the injured limb. It requires but a few minutes to adjust, and is applicable for any sort of fracture.

Barnes.



VENETIAN HOSPITALS.

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SCOTS FUSILIER GUARDS.

In the month of August I visited Venice, and took an opportunity of going over the Civil Hospital there. Possibly some notes then made may interest those readers of THE LANCET who, like myself, have hitherto been little conversant with the internal economy of such institutions in Italy. And the somewhat generally received impression, in which I shared, that a city so peculiarly, and, in a sanitary point of view, so unfavourably placed must necessarily cause a large amount of sickness, led me to anticipate the prevalence of disease to a greater extent and of a graver type than is met with in other continental towns. The

month of August, too, I looked upon as probably the period of year when maladies ordinarily associated with defective sanitation would most abound. I left Venice, however, with a better opinion of it as a place of residence than I had previously entertained—a circumstance based partly on observation and partly on facts elicited from one of the resident medical officers of the institution to which I have referred. These latter it will be my object to condense as much as possible. My ignorance of the Italian language and superficial knowledge of the French—the only medium of communication available—placed me at a disadvantage.

The Civil Hospital is a very large, massive old building, of an elongated, quadrangular form. Its former designation was the Scuolo de S. Marco—one of the old ecclesiastical foundations, of late utilised for other purposes. Probably it is the best edifice both as regards construction and site that could be thus turned to account, notwithstanding its antiquity. For, as regards situation, a comparatively open position, arising landward from its abutment on one of the very few open—"breathing"—spaces (campos) that are in the city, and, seaward, the junction of one of the larger branch canals (Rio del Mendicanti) with the Adriatic, point to it as a locality more suitable, as a hospital, than can be met with in other parts of Venice, where very narrow streets and densely-packed houses are the rule.

The hospital accommodates 1000 inmates. The larger rooms contain some 80 beds, the smaller 40. There are no small ones to accommodate cases needing segregation—a defect. The wards, as might be expected in an old building, are somewhat deficient in height. Bedsteads of iron; bedding of the ordinary kind. The beds are placed closer to each other than is advisable in some wards; not so in others. On the whole, the distance between them is much the same as obtains in our London hospitals. Ventilation is effected alone by open windows. These are sufficiently numerous, and, being placed on opposite walls, a free current of air is afforded. There is an absence everywhere of "hospital smell," and the rooms are clean and orderly. The nurses I saw were not Sisters of Charity. The material of which the floor is made everywhere in Venice, both in upper and lower apartments, must tend greatly to prevent the propagation of infectious disease (alike in private houses and public institutions), and to keep the wards cool and clean. It is a kind of composite made apparently of small fragments of red marble cemented into a mass, the surface being smooth, hard as granite, and apparently very durable.

Diseases are classified, and wards set apart for fevers, skin affections, venereal and ophthalmic cases, medical and surgical complaints. The only malady prevalent to a marked degree every year is one that the site of Venice would plainly lead one to expect—viz., intermittent fever. It is common late in the autumn. Another more grave affection I fully anticipated meeting with at the time of my visit, and presumed would cause large mortality—viz., enteric fever. I was in error. The disease indeed occurs in summer, but not, it would seem, as a virulent epidemic, only cases at intervals. At the date of my inspection very few patients were thus affected, and they were convalescent after apparently slight attacks. There were some ordinary examples of chest disease (consumption, pleurisy, and heart affections) and one of diabetes. I found that tapping the chest by aspiration was a procedure approved and followed; and, indeed, my inquiries elicited that the treatment of disease generally was in accordance with the views held by our latest and best authorities, and that the Sangrado system, for which Italian physicians had at one time a rather unpleasant notoriety, was exploded. Thus the supporting, building-up procedure, especially with reference to pneumonia, use of wine and nourishment, is carried out. How far these restoratives correspond with our own I shall presently consider.

The lock wards were at the top of the building, equally in good order with the others. Scarcely any of the women were in bed, and as periodical examination of prostitutes is carried out, it would seem that the ailments were not of a severe character. A physiognomist would not have been impressed favourably with the countenances presented there. Essentially animal, especially as regards the mouth and chin, jaw broad and flat, forehead low, nose coarse and sunken, countenance pale—the *ensemble* was that of a being

in whom the moral faculties were wholly wanting. I dwell on this point because, glancing round the wards, I was struck with the strong likeness the patients, all young, presented to each other. Roman women of ancient history, types of sensuality and cruelty in their sex, were recalled to my mind very strongly by those before me.

All the classes of disease I met with were essentially of a low type; the patients for the most part young or middle-aged. This especially applied to the ophthalmic cases, which seemed to consist almost entirely of strumous ailments, such as granular affections of the eyelids. These latter I understand are frequent.

In the surgical wards I was shown two operations: one, recent, of strangulated inguinal hernia was doing well; he had been operated on the day previous to my visit;—the other was a man whose great toe had been removed. The dressing used in both cases was a very coarse kind of charpie put on dry, with a piece of wet rag over it. These appliances are indifferent substitutes for water dressing and oil-silk. The ulcers were pale and flabby. The post-mortem room was a good one, suitably fitted up with large marble slabs for the bodies to rest on. Rather unfortunately, it overlooks a little garden—a place as rarely met with here as in Malta—in which the convalescent patients take exercise. The museum I cannot speak as favourably of; it seemed small and poor. Probably, however, it has not been long formed, and will improve. Visits by the hospital staff are made early in the morning. The kitchen appeared to me ill-adapted by its fittings for the wants of so large an institution. It was evident that broths and stewed meats were the articles of diet cooked by the ranges; that such things as roast or even baked meats, chops, &c., were little, if at all, known. Although the mutton is small and lean, very tolerable beef is obtainable. The poor, as in France and Switzerland, seem to live more on veal—the coarser parts—than any other meat, doubtless from its lower price.

Two conclusions I arrived at after going over the hospital. One, that the type of disease must be invariably low, associated with poverty of the blood, prohibiting depletory measures, and demanding the opposite mode of treatment from the very outset. The other was the inadequacy of dietetic means in use to meet these requirements. In addition to deficient nutriment from food, in all probability the class of wines prescribed is not that which possesses body, and malt liquors, I infer, are in this country unemployed.

In closing these remarks, it is only fair to state that much indigence is said to prevail in the lowest order of people; that consequently inmates of the Civil Hospital may be well classified with those met with in the wards of a large English Poor-law infirmary rather than with a well-fed artisan community.

I have said that the salubrity of the city, on the whole, much exceeded my expectations. To this satisfactory condition various agencies contribute. There is no rank vegetation. The sea, highly charged with saline ingredients, moves in a current, though slowly, through the maze of canals, carrying with it animal and vegetable refuse, that in other cities less favourably circumstanced might accumulate in yards, holes, and corners, and generate fever. No mud is uncovered by the tide, which falls, I believe, about a foot in the city itself; and, seawards, the wide open expanse over which the breezes sweep would seem to obviate ill consequences from the action of the sun on the lagoons. A slight smell from the canals is sometimes perceptible in the evenings when the sea is below water-mark—nothing unbearable. Water is brought by pipes from the mainland, a considerable distance, and supplied by public fountains. It is apparently sufficiently abundant. As to its quality I cannot speak positively. It tastes flat, rather insipid, but causes no ill consequences to travellers. There are some old wells yet in use. Mosquitoes are a bugbear to travellers; and if the latter will be careless as to precautions, and light their candles and leave the windows open for some time before retiring to bed, they may expect the unpleasant consequences which I one night experienced. But if they take the precaution to shut the window on entering the room, and, for ventilation, reopen it when they have extinguished the candle, annoyance may be avoided. This hint I learned from a Southern States American. The heat of Venice in August is not greater than obtains in London at the like season of the year.

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