

and others had more frequent opportunities of attending to such cases, in preference to mere theoretic abstractions and novelties. The French surgeons have recently traced some of the cases of "gelatio," or gangrene in the Crimea, to the use of ergot of rye in unwholesome rye bread.

In Mr. Hilton's case, Nature has quite removed both legs by what might be called the "circular" operation far above the line for Chopart's or Syme's amputation. The mode of removal of the fingers has also been similar in Mr. Adams's case.

G. R.—, aged thirty-five, "gelatio," was admitted into Guy's Hospital, under the care of Mr. Hilton, on February 6th. He states that he is a gentleman's coachman, and that being exposed on his box for five hours consecutively on one of the coldest days of the past winter, he felt, to use his own words, "quite frozen to death," especially about the feet; indeed so much so, that he had to be helped off the carriage box; he was quite without feeling all the time, and no heat that was subsequently applied could get proper life into the feet, which very soon became entirely gangrenous and black, leaving the ends of the bones (tibia and fibula) in both limbs, as now, quite bare; the black feet sloughing gradually from day to day worse and worse, and ultimately falling off. The treatment has been chiefly of a temporizing kind, according to the symptoms; he has had various preparations of cinchona and ammonia, with generous diet, while externally the applications have varied according to the indications. It is very probable that much of the mischief originally arose from the man himself, in ignorance, putting the feet suddenly to the fire when completely frozen, and when without feeling to test the excessive heat. The peculiarities of sensation, indeed, are not a little remarkable. A poor man at St. Bartholomew's Hospital, who had both his legs amputated last year in consequence of a ton weight falling on them, feels something this spring like chilblains or cold in his feet, though the latter were amputated several weeks previously, and put up as preparations in bottles. Mr. Hilton pointed out to us incidentally something similar in a woman, whose leg he amputated last week. Here the patient spoke also of her foot and toes; she had scarcely had time, perhaps, to realize the altered impression made on the nerves of the stump. These singular phenomena of sensation are familiar, of course, to most surgeons, and yet with all this sensibility on the face of an artificial stump it is no safeguard, it is well to remember, against the disease under consideration. Here the organic sensibility, so much dwelt upon by Bichât, seems entirely destroyed. In a practical point of view, excessive ranges of temperature are deserving the study of the surgeon. It has been recently stated to us that in Australia during the last six months, (a latitude and longitude not very different from that of England,) while we have had a most unusually severe winter, the thermometer some days at 12° Fahr., twenty degrees of cold! and skaters on the Thames, the thermometer in Australia at the same moment was standing at an excessive height of 139° Fahr. We do not here allude obviously to the excessive heats of the tropics or line, but to those singular varieties of temperature and climate to which emigrants, every-day patients of surgeons, may be subjected, and for which Nature has made abundant provision if properly understood. The climate of the Crimea is milder, but far more variable, than that of England; the degree of heat, or, what is the same in a negative point of view, the degree of cold, which certain animals, and more especially the higher classes, can bear, is very remarkable. Men have gone into heated ovens, and instances are given of dry air at 250° Fahr. being endured for a considerable length of time; while fishes are still oftener frozen to tinkle-like crystal. It will be remembered, however, that here the *actual* heat of the body undergoes little real change, and that a heat of 110° Fahr., never reached perhaps in the most burning fever, is equivalent to death. Nature adapts the frame to the fearful heat of 250° Fahr. by a copious perspiration or evaporation of water from the surface, which carries off the heat; for if this be prevented either by want of drink or fluid from inside, or saturation of the surrounding air outside with moisture, the temperature rises, and a temporary elevation of about 12° above the natural standard, or a depression of about twice that number of degrees below the natural standard, is alike followed by death. The process by which animal heat is generated in the human body is familiar, no doubt, to most readers; its intimate relation with the amount of carbonic acid produced in the lungs, and possibly also with that of sugar in the liver from fibrin of the blood of the hepatic vein, explains how in cases of frost-bite, *cæteris paribus*, the delicate are those most subject to be attacked—those, in a word, in whom the resistance to cold or the natural heat-producing powers of the system, as in the present cases, are seriously deranged or diminished.

KING'S COLLEGE HOSPITAL.

EXCISION OF THE ELBOW-JOINT.

(Under the care of Mr. FERGUSSON.)

A CASE of Mr. Fergusson's, in which he pointed out to his class a peculiar variety of thickening of the synovial membrane, or, we might say, india-rubber elasticity of the olecranon before operation, attracted our attention last week. Mr. Fergusson performed the operation of excision on Saturday, when his previous views were fully corroborated by the appearance of the parts after operation. The case is one rather familiar to surgeons.

A. B.—, a woman about thirty years of age, received some little injury of the elbow last autumn, followed by severe inflammation, for which she applied various remedies, which were of no use, as on admission into the above hospital this month, the elbow was very much swollen and tender, with purulent sinuses round the articulation; in short, in a state fit for amputation, but Mr. Fergusson recommended the more useful operation of excision. The operation gave rise to much speculation and conversation.

Mr. Fergusson certainly cannot command success, but we should say, from a long experience of his operations, he deserves it. Resection a few years ago, before the discovery of chloroform, was almost an impossibility. Sir Philip Crampton describes a solitary case, where a poor girl was operated on "who, on coming into the operating-theatre, exhibited the greatest fortitude, and even cheerfulness, on the instant the knife was applied to the skin became so ungovernable that four strong assistants could with difficulty retain her upon the table." This is now all happily obviated by the use of anæsthetics. A new saw, to cut "round corners," not to bruise the bone, as with the cutting-pliers, as suggested by Mr. Butcher, of Dublin, (who gives thirty-one re-sections of the knee, and five deaths,) now used at Guy's Hospital, is of great use for getting into the parts about the knee-joint or elbow. The history of these operations may be conveniently divided into two epochs: the first, comprising all the cases without chloroform, down to the practical abandonment of the operation in 1830; and a second epoch, which we have watched with some interest in London from the revival of these operations under chloroform, for the last six or eight years, and chiefly at King's College Hospital. In the first epoch, without chloroform, of about nineteen or twenty cases, not less than eleven died, a result decidedly discouraging; while, in the latter epoch, with all the disadvantages of bad air in London, we believe the danger of excision of the knee-joint is not more than that attending amputation higher up. We have more than once examined the interesting specimen in the College of Surgeons Museum referred to by Mr. Syme (*ante*, p. 397); it clearly shows at least bony junction, which now, with gutta-percha splints, might be as well in a *straight* line as a crooked one; our further experience of the operation of excision removing the obvious fault of the preparation in the Hunterian collection.

In operations on the knee some difficulty still exists. Differences of opinion, no doubt, are found. The knee-joint is proverbially a difficult and delicate articulation to cut into; such a large organ being diseased, or requiring operation, necessarily implies a large amount of previous general constitutional disease—perhaps tubercles or scrofula in an aggravated form. In removing the synovial membrane of the knee-joint, — Mr. Bransby Cooper once remarked to us,—one removes a serous membrane as large perhaps as the pleura of one side. Most observers agree with Mr. Syme, whose late lecture on the subject has been very much canvassed, that the cases of excision of the knee-joint are very slow, and scarcely fit for the wards of ordinary hospitals. It is very wonderful, however, with a little kindness and sympathy for such patients, how they linger on for months and months in hospital, and suddenly start up perfectly cured, to the joy and rejoicing of everybody, and become quite "lions" of medical societies. Hope seems ever to remain with the sick patient, though medical visitors to the wards may shake their heads. One poor young woman, for instance, in one of Mr. Erichsen's wards, in University College Hospital, with excision of the knee, has gone through as many chameleon changes during the last ten or twelve months as would shake the faith of any surgeon less expert. Mr. Syme is not peculiar in these dreadfully slow cases. In one of Mr. Fergusson's beds, a little child, with his knee taken away, has been so long under treatment that he is becoming an adept in the anatomy of the knee, and the art of bandaging; and though once a little creature, almost too small to put under Dr. Beale's microscope, is now quite stout, and will probably make an ultimate recovery. We have observed analogous cases under

the kind, quiet care of Mr. Cock at Guy's, and Mr. Stanley at St. Bartholomew's, who has lately, by the way, repeated his resection operation on the wrist, exhibited at Mr. Guthrie's lecture: tedious cases, also, under the care of Mr. Adams and Mr. Curling at the London Hospital, Mr. Solly at St. Thomas's, Mr. Coulson and Mr. Ure at St. Mary's; we have, in a word, quite as tedious cases in London, as Edinburgh; yet with the triumphs of this modern improvement, even with all its disadvantages and tediousness, as shown us by Mr. Hancock at Charing-cross Hospital, Mr. Fergusson, Mr. Erichsen, Mr. Jones of Jersey, and some others, a candid observance of the subject must lead us to prefer it to amputation, a difference of opinion exists. Mr. Jones of Jersey, who has paid most attention to the subject, not at all agreeing with the views expressed by some writers, while the older surgeons perhaps remain at the opposite extreme.

The operation, either at the knee or elbow, is not an inviting one, there is so much cutting as it were of two stumps in place of one; the older surgeons, Mr. Jones seems to think, are accustomed to dwell too much, perhaps, on this subject. Happening to be present with this gentleman at two amputations above the knee one day not long since, at St. George's Hospital, though Mr. Caesar Hawkins, Mr. Prescott Hewitt, and the other surgeons, acted perhaps, in consultation, on the safe side of the question, preferring amputation of the thigh, Mr. Jones did not hesitate to say that at Jersey he would have certainly saved one of the knees, and he had his doubts about the second operation; sea air, quietude, gentle stimulants, with generous diet and large airy wards, however, he admitted, were half the means of cure. If we leave out these hygienic conditions, as observed by Mr. Fergusson, figures or statistics may be brought to prove almost anything. Lithotomy and lithotomy, Mr. Cock (at Guy's) believes, and we are inclined to go with him, are not at all *parallel* operations, so that all figures based on this subject are clinically incorrect. We should take care that resection and amputation at the knee are not in somewhat of a similar position. We strive to do a great deal more for the patient under resection than amputation, for which some patients will run any risk, while amputation is inevitably attended with consequent mutilation, the remarkable success attending Mr. Syme's twenty operations rather takes them out of the category of both classes. It is also remarked, in operating-theatres in London, that in the operations on the knee, (the only operations, be it observed, respecting which there is any difference of opinion,) the smaller experience of our northern hospital, as observed by Dr. Snow, as to deaths from chloroform, and the old-standing nature of the cases sent to Edinburgh, may have led to a less hopeful conclusion there than in London, almost everything depending on operating *early*. It is true, as remarked by Mr. Syme, that resection is only practised in selected cases, "while the results of amputation are collected from all sorts, no matter how unfavourable," but we must confess that in Mr. Fergusson's cases, we have observed him select very bad ones indeed, and that amputations like those Mr. Jones remarked on at St. George's are not always the most unfavourable. Some extended remarks occur so recently in *THE LANCET*, (*Mirror*, *ante*, January 21, 1854,) that we do not feel it necessary to follow up the subject at present.

Were we inclined to put very much faith in mere statistics of operations so dissimilar as amputation and resection, equals added to unequals, we might give twenty-six interesting cases of resection of wounded in French ambulances; eleven immediate resections or cutting out of bullets with bones from joints, ten cured and one death; fifteen secondary resections—eight deaths from pyæmia, only three recoveries, and four surviving with fistulous openings, requiring amputation; M. Baudens, the successor of Larrey, concluding this to be "un magnifique résultat obtenu si on le comparé à l'amputation du bras en totalité." As to operations on the elbow and wrist, as remarked by Mr. Fergusson in the present case, there can be little doubt at all of the propriety of the operation, the only practical difficulty being in large joints like the knee, hip, or shoulder. With regard to the last joint, the French surgeon just quoted gives four operations of bullets cut out with the head of the humerus, and three recoveries.

ST. MARY'S HOSPITAL.

CASES OF FRACTURE OF THE LOWER JAW; RECOVERY.

(Under the care of Mr. COULSON.)

THE two following cases of fracture of the lower maxilla present some features of practical interest; not that this disease is undescribed or not very well known, but that the cases are

instructive as showing how this accident generally occurs, and under what circumstances the surgeon should look for it, when suddenly called in emergencies of a like kind. In the second case chloroform was required before the dislocated parts could be reduced, whilst in the first the recovery was very remarkable and quicker than might have been expected.

CASE 1.—*Fracture of the Lower Jaw in three places.*—Victor I—, aged twenty-five, cook at the Great Western Hotel, was admitted into St. Mary's Hospital Nov. 22nd, 1854, under Mr. Coulson, for a severe fracture of the lower jaw. The manner in which the accident happened was as follows:—He was passing up the lift-ward in carrying heavy articles from the lower part of the hotel to the upper, when he incautiously put his head out at the side. The lower jaw was caught by some projection, and the head squeezed forcibly between two hard surfaces. On admission, it was found that the lower maxilla was fractured in three places. There were two fractures of the ramus on the left side, one of which was compound, and one of the ramus on the right side. The upper and back part of the scalp was much injured.

A pasteboard apparatus was with some degree of difficulty applied so as to retain the pieces of the broken jaw-bone in proper apposition. The edges of the scalp-wounds were brought together by means of strapping. The scalp-wounds made a rapid progress towards cure, and in five days were nearly healed.

Dec. 2nd.—The process of union seems now fairly set up. Ordered to take dilute nitro-muriatic acid, with decoction of bark, three times a day.

29th.—The patient finds himself sufficiently recovered to wish to leave the hospital and go to his friends in Paris. The fracture is now consolidated, and very firmly so, all things considered.

CASE 2.—Peter G—, aged fifteen, was admitted March 7th, 1855, under the care of Mr. Coulson. He is employed with horses on the Great Western Railway, and on the day of his admission into the hospital he received from one of them a kick on the lower jaw.

On examining the jaw, there was seen to be a wound of trifling extent to the right side of the chin. On opening the mouth, the line of the teeth on the right side of the lower jaw was found to be not uniform. There was fracture of the lower jaw, the fracture passing vertically through the ramus, between the right canine tooth and the lateral incisor. Posteriorly to this point the jaw-bone was drawn inwards, the remainder of the teeth pointing upwards and inwards, and the canine tooth being immediately behind the lateral incisor instead of to its external side. Mr. Coulson pointed out to the class the nature of the injury, the distinctive characters of the fracture, and the consequent displacement of the posterior fragment by the action of the muscles, and proceeded to reduce the fracture. This was easily effected by placing the end of a towel on the incisors of the lower jaw and drawing it forwards, at the same time that the posterior detached portion was pushed outwards into its proper position. When this had been accomplished, the line of teeth was quite uniform. The jaw was maintained in its position by means of the four-tailed bandage, and the patient ordered to bed. Chloroform was administered before the reduction was attempted. Ordered to wash the mouth out frequently with a lotion containing a few drops of the solution of chloride of lime mixed with water.

March 12th.—The patient uses the right side of the mouth much more than at last report. The tongue is foul, and he had some slight shivering last night.

28th.—Since the last report there has been nothing unfavourable in the condition of the patient. The redness about the nose has quite disappeared, and he feels quite well.

THE MEDICAL FORCE IN THE EAST.—From a return made by Dr. Andrew Smith, it appears that the total number of practitioners sent to Turkey, including civil surgeons, apothecaries, dispensers, and dressers, is 529. Three or four civilians are on duty with the army, engaged under the sanction of Lord Raglan.

The total numbers of medical men who have died or been invalided: Died, 29; Invalided, 38, of which number, 7 have rejoined.

The total number, including apothecaries, dispensers, and dressers, at present with the army, up to the latest date, is 469. From another return we discover that of this number 297 are under thirty years of age, and 191 are under twenty-five years.