

ed the anæsthetic properties of the drug, whilst admitting that it was a most excellent hypnotic. On the other hand, M. Léon Labbé admitted its anæsthetic properties; but both these investigators denied the transformation of chloral into chloroform. M. Bouchut now declares—and I must sum up briefly, so as not to devote too much of my letter to this subject—that chloral is a powerful sedative of the nervous system, motor as well as sensitive; that it must be employed in a crystallized form, and perfectly pure; that it must not be administered beyond doses of five grammes to adults, and one to two to children; that it is dangerous to employ it in any subcutaneous injections; that it is more speedily absorbed by the rectum than by the stomach; that its action is that of chloroform, into which it is transformed within the human organism; that it brings on sleep, sometimes accompanied by a not unpleasant intoxication, seldom by hyperæsthesia, and most frequently by anæsthesia, which is more or less complete, according to the strength of the dose.

There is one point which M. Bouchut seems to have investigated with peculiar care—I mean the therapeutical properties of chloral; and as this part of the subject has been less ventilated than that of the physiological effects of the substance, I subjoin in M. Bouchut's own words, the results of this practice:—"As a therapeutical agent, hydrate of chloral is the sedative of violent pain in gout; of the atrocious sufferings occasioned by nephritic colic and dental caries; in a word, it is the very best of anæsthetics administered through the stomach. Lastly it is the quickest and most efficacious remedy in intense chorea, when it is required to abate speedily a condition of restlessness which is in itself a peril to the patient."—*Paris Correspondent, Lancet.*

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OPERATIONS BY MR. MARSHALL.

1. *Amputation of the Leg.*—On the 4th inst. amputation at the lower third of the leg was performed on a man whose foot and ankle had been much damaged through the inflammatory processes following a severe crushing injury. There was great loss of integument, especially over the outer malleolus, and extensive sloughing, which had involved the ankle-joint and caused softening and detachment of the articular cartilages. The operation was one of much interest, in consequence of a further modification in a plan of dealing with stumps, which, though frequently practiced by Mr. Marshall, has not, we believe, been hitherto tried by other surgeons. The two flaps were lateral and rectangular, of equal dimensions, and of large size, as they extended for some distance in front of the ends of the bones. After the arteries had been closed by torsion and the edges of the wound approximated after the usual manner by interrupted sutures, two strong wire sutures were passed deeply through the substance of both flaps close to the ends of the bones, so as to bring together and maintain closely in contact the inner muscular surfaces of the stump. It had previously been Mr. Marshall's usual practice to supplement these deep sutures by two well-

padded wooden splints, which were applied over the flaps; but on this occasion those appliances were replaced by two long strips of bandage well saturated with a paste of plaster-of-Paris. This change was instituted for the purpose of obviating the disturbance of the flaps through a displacement of the wooden splints which is rendered necessary for the removal of the deep sutures on the third or fourth day after amputation. The wire sutures can be readily withdrawn through the plaster splints without necessitating any movement of the apparatus covering the stump. No sponges were used during the operation, and after the stump had been secured the wound was covered by lint dusted with creasote powder.

Mr. Marshall, in some remarks made after the operation, stated that this plan of treating stumps was proposed as a more effectual means than the method of bandaging for keeping their muscular surfaces at rest and in close contact with each other; and also for preventing collections of blood, pus, and other irritant fluids between the flaps. In many stumps, after speedy union has taken place between the edges of the external wound, recovery is frequently retarded in consequence of a deep-seated accumulation, which must find its way to the surface sooner or later. The stump resulting from this plan of amputation seems at first large and unsightly, as the redundant flaps form a fin-like appendage. This, however, by the subsequent relaxation and partial absorption of the soft structures of the stump, becomes much reduced in size, and ultimately constitutes a firm and useful extremity. The deep sutures have been applied by Mr. Marshall in several cases of amputation; and there will, doubtless, be ere long a sufficient record of cases for enabling surgeons to judge of the utility of a plan of treatment which seems to be well adapted to lessen the time of healing of a stump, and, consequently, to prevent erysipelas, pyæmia, hectic, burrowing of pus, necrosis, and all the general and local complications which result when a stump does not heal favourably.

2. *Plastic operation for Chronic Ulcer.*—The subject of this case was a young and healthy agricultural laborer, who, some few months before his admission into University College Hospital, had received a severe injury to the soft structures about the left knee. This was followed by extensive sloughing of the integument, and the formation of a large granulating surface over the front of the leg and the popliteal space, which had cicatrised favourably over a great part of its extent, but left a long and narrow ulcer extending across the posterior surface of the knee-joint. This, in consequence of the retraction of the surrounding cicatrised tissue, and of the frequent action of the hamstring tendons situated immediately under its base, could not be made to close, and the man was sent to Mr. Marshall under the supposition that amputation would be required. The limb was kept at perfect rest and in the extended position for about five weeks; but as this treatment had very slight effect upon the size of the ulcer, Mr. Marshall decided upon performing the following operation, in order to give the patient a chance of retaining a useful limb:—The edges of the ulcer having been pared, a long flap of integument was transplanted