THE "IMPERMEABLE PILINE" A REMEDY FOR BURNS.

By ALFRED MARKWICK, Surgeon to the Western German Dispensary, &c.

Although various plans of treating burns and scalds have been recommended by different writers, still the chief indication seems ever to have been to exclude the air from the injured part, and thereby alleviate as speedily as possible the sufferings of the patient. The remedies, therefore, that have been employed in these cases, have all been more or less directed towards accomplishing this most desirable object. Indeed it is evident that this must always be of paramount importance, inasmuch as the prognosis is found to be dependent more on the *extent* than on the *severity* of the injury, for, as is well known, burns and scalds, even of the first degree, when *extensive*, often prove fatal, entirely in consequence of the pain they occasion. In his valuable "Dictionary" Mr. Cooper remarks, "I believe that one of the most important principles in the treatment of burns, is to exclude them as much as possible from the air, and that it is in this way that the treatment with powdered chalk, the linimentum calcis, the linimentum terebinthinæ, flour, &c., proves very commonly advantageous. In particular, several of these applications supersede all occasion for an early or a frequent removal of the dressing, and exposure of the part. When it is considered what agony is thus prevented, we cannot wonder that the simple application of flour should have come into extensive favour." And we find this opinion corroborated by the following paragraph, translated from the article on "Burns," by MM. Marjolin and Ollivier, in the "Dictionnaire de Médecine:"—"The first indication to be fulfilled is, as we have said, to subdue the violent pain which generally accompanies burns. Several topical applications we have seen, have been recommended, and are had recourse to, in order to obtain this result."

In my last communication I stated that I had found nothing to answer the purpose so *effectually* as the *impermeable piline*, and my object on the present occasion is to lay before my fellow-members of the Association the cases upon which that assertion was founded.

Case 1.—Was that of a servant of my own, who scalded the back of her thumb very severely with a piece of boiling-hot soft potato. Vesication of the whole surface was immediately produced, and, as might be expected, very considerable pain occasioned. A piece of "pilene" was quickly applied, and sewed tightly round the part. The pain soon subsided, and in two days a perfect cure was effected.

Case 2.—A person burnt his hand with a red-hot iron; considerable pain and inflammation was the result; speedy relief, however, to both was afforded by the application of the piline, and the following morning the part was sufficiently restored to be left uncovered, and enable the patient to perform his accustomed duties.

Case 3.—A lady, residing at Halsey Terrace, Chelsea, in coming down stairs, put her foot into a jug of nearly boiling water, which the maid-servant had carelessly left there. The part at once became exceedingly

painful and tender, and on removing the stocking was found to be much inflamed. A simple piece of rag was at first applied, but finding no relief from this, she was recommended by a friend to try the piline. She did so, and to use her own words, "found relief almost immediately after."

Case 4.—A gentleman living at Kennington, while sitting by the fire, taking his tea, upset from the mantelpiece a cup of very hot coffee, which fell on the inside of his left leg, just above the ankle. Violent pain was produced, and on removing his slipper and stocking, the part was seen to be considerably inflamed; the epithelium, however, was not raised. He immediately applied a piece of piline firmly round the part, and, to use his own expression, "was relieved from all pain in about ten minutes, and on the following morning not the slightest tenderness remained."

The great advantage of the piline in the treatment of burns and scalds appears to me, from the foregoing cases, to consist in *perfectly* excluding the air; in rapidly relieving the pain, tenderness, and inflammation; and though last, not least, in promoting the restoration of the secreting functions of the injured part,—a circumstance of no little importance, when we consider how much our well-being depends on the due and proper performance of the cutaneous transpiration. Indeed the *post-mortem* appearances met with in some parts of the intestinal canal have been attributed by Mr. Curling to the endeavour on the part of the duodenal glands, "by an increased action, to compensate for the suppression of the exhalation from the skin," giving rise to irritation and subsequent inflammation and ulceration.

While on the treatment of burns I may allude to the benefit that has been afforded by the "spongio-piline," in those cases where the epidermis has been destroyed.

Case 5.—A child about twelve years of age, in poking the fire, upset the kettle, the boiling contents of which fell upon both feet, scalding them very severely. The stockings were removed as quickly as possible, but the epidermis, which had been raised in several places, became lacerated in doing so, and was found adherent to the inside of them. The scalded surfaces then presented a raw and very inflamed appearance, and were excruciatingly painful. The child rolled himself on the sofa, and could not contain himself from the agony he was in. A piece of soft linen rag was applied to the injured parts, and over this a piece of "spongio-piline" wrung out of hot water, which was fastened on by means of a roller, and wetted once or twice in the twenty-four hours. In the course of ten or fifteen minutes the violence of the pain became subdued, and in an hour afterwards perfect ease was obtained. The "spongio-piline" was persevered in for about a week when the parts were completely restored.

Case 5.—The subject of this case was treated by Mr. Babbage,* with the material in question. I am

* I have written to this gentleman requesting that he would send the particulars of this case, and the result of his experience generally in the treatment of burns, for insertion in the *Provincial Medical Journal*.—A. M.

indebted for its history to a niece of the patient. It appears from this person's statement that her aunt, (an elderly and infirm person,) while sitting at work one evening, set fire to her cap, and before she could extinguish it, one side of her face was severely burnt, so much so that the cheek bone was exposed. Mr. Babbage was sent for, and ordered the "spongio-piline" to be wrung out of hot water and applied. This was done and persevered in with considerable benefit for a fortnight, granulation and cicatrization proceeding most favourably under its influence. A piece of lint, covered with some simple cerate was then placed between it and the wound, and continued for a few days, when the part was found to have completely healed. In this case scarcely any appreciable scar was left, notwithstanding the severity of the burn. May not the continued application of moisture, as in this instance, be the means, in conjunction, of course, with maintaining the parts in a proper position by bandages, of preventing many of the frightful deformities that so frequently result from severe burns?

19, Langham Place, January 3, 1847.

Proceedings of Societies.

BIRMINGHAM PATHOLOGICAL SOCIETY,

October 7th, 1847,

JOSEPH WICKENDEN, Esq., in the Chair.

Dr. Mackay brought before the Society the following specimens of disease:—

SCIRRHUS UTERI,

Taken from the body of a woman aged 40, the mother of several children. She died of exhaustion from frequent uterine hæmorrhage, excessive pain in the region of the uterus and sacrum, which existed more or less severely for three years, and diarrhœa. The ulcerative process had destroyed the os, cervix, and the body of the uterus, excepting a portion of the fundus, about the size of a common nut, and had extended into the bladder and rectum.

ABSCESSSES OF THE LIVER: JAUNDICE.

The liver was taken from the body of a woman aged 54, who six weeks before her death was seized with inflammation of that organ, followed by profound jaundice. The inflammatory symptoms speedily subsided, but the jaundice continued until death. The ductus communis choledochus was blocked up by a gall-stone; the gall-bladder was full, its mucous coat ulcerated in several places; and in the liver was found several abscesses, containing a dark green fluid of the consistence of thick cream. The proximate cause of the inflammation and jaundice appeared to be the impaction of the gall-stone in the duct, inducing destruction of the cyst, ulceration of its mucous coat, and subsequently inflammation of the substance of the liver.

FRACTURED RIB,

Taken from the body of a man who died of pneumonia. The body was examined under the coroner's precept in consequence of his widow's alleging that he had died from the effect of blows upon his chest,

inflicted by a fellow-workman. The existence of fracture appeared to substantiate the charge, and to criminate the alleged assaulter, who had been taken into custody, but careful inspection shewed that the fracture must have occurred long antecedent to the date of the alleged injuries; the prisoner was consequently acquitted.

NUTMEG DISEASE OF THE LIVER,

Taken from the body of a married woman, aged 56, who had for many years been in the habit of drinking "moderately" of gin. For the last two years of her life she complained of anorexia and rejection of all food.

FATTY TUMOUR.

Mr. Elkington presented a quantity of fatty matter having the appearance and consistence of common beef dripping. It was removed from a recto-vaginal tumour during labour. The tumour considerably diminished the capacity of the pelvis, and prevented the descent of the child's head. It was punctured per rectum with a curved trocar, and the contents, when drawn off, were of the consistence of thick cream, becoming firm when cold. The patient was afterwards delivered by craniotomy, and recovered slowly, after two or three attacks of inflammation.

November 4th, 1847,

R. L. BAKER, Esq., in the Chair.

Mr. Simons brought before the Society a larynx taken from a patient aged 48, who had died from acute laryngitis, ten minutes after the operation of tracheotomy had been performed.

MULBERRY CALCULUS.

Mr. Dampier exhibited a large mulberry calculus, weighing four ounces and one drachm, taken from a patient by the operation of lithotomy.

Mark Heywood, aged 42, short, stout, and well proportioned, came under my care in May, 1847, suffering from symptoms of stone in the bladder; urine sometimes alkaline, at others acid, for which he was treated accordingly. On introducing a sound, a calculus of considerable size was detected, very rough. He went on for some time, during which the symptoms became more urgent and distressing. In the end of June I again sounded him, when the sound struck the calculus the instant it entered the bladder, which convinced me it was of considerable magnitude. I then proposed the operation of lithotomy, to which in a few days he agreed. I accordingly fixed the 6th of July, on which day, having previously prepared the patient by medical treatment, I performed the lateral operation of lithotomy, in the presence of Dr. Bell Fletcher, Messrs. Laurence, Cooper, Walker, and Langston Parker, who kindly held the staff for me, when I succeeded in extracting a mulberry calculus, coated by the phosphates, about the size of an orange, of a rocky form, like a piece of sea coral, and weighing four ounces and sixty grains. The patient progressed favorably for four or five days, when orchitis attacked him, but he ultimately recovered, and is now gone to work in good health.