

Uses and Dangers of Iodoform.

MIKULICZ (*Wiener Med. Wochenschrift*, 1881, No. 23) gives the results of the use of iodoform in Billroth's wards. He claims that it is in antiseptic qualities equal to carbolic acid, is more easily used, and less apt to cause constitutional disturbance by absorption. Symptoms of poisoning are, however, seen in rare cases, and in the *Deutsche Med. Woch.*, 1881, No. 34, A. Henry describes two fatal cases. (See p. 460 of last volume of this JOURNAL.) The symptoms are of the narcotico-irritant type.

In open wounds the iodoform is sprinkled on the surface and covered with lint and gutta-serena tissue, fixed by a bandage. The results have been very satisfactory; the dressings require changing but seldom, discharge is slight, decomposition never occurs, and there is rapid formation of healthy granulations. In incised wounds healing is even more certain than with carbolic acid, and there is much less fear of absorption causing constitutional disturbance.

Wounds implicating mucous surfaces, as of the mouth or rectum, are usually very difficult to treat antiseptically. In such cases iodoform, applied on gauze compresses, has been found to completely prevent offensive smell, and to cause no discomfort to the patients.

In a case of removal of an abdominal tumour, iodoform was sprinkled into the cavity and the wound closed at once. The patient recovered without a bad symptom.

In septic gangrenous or sloughing wounds the results were especially satisfactory. Sprinkling with iodoform removed all smell in from four to six hours, and the wounds healed rapidly and without discharge, even in some cases where severe constitutional symptoms had already appeared.

In strumous diseases iodoform is said to give such brilliant results as almost to entitle it to the rank of a specific. (See also V. Mosetig-Moorhof in *Wien. Med. Woch.*, 1881, No. 13.) Fungating ulcers, with spreading undermined edges and offensive discharge, healed rapidly and completely under a thick layer of iodoform.

In lupus also its effects are gratifying. Riehl (*Wien. Med. Woch.*, 1881, No. 19) gives the results of twenty cases in Kaposi's clinique. The epidermis, when necessary, having been removed by the application of 5 to 10 per cent solution of caustic potash, the iodoform is laid on in a layer several millimetres thick, and fixed as above described. On removal of the dressings in from three to eight days the disease is found completely removed, redness and swelling gone, and the sore skinned over.

In deep wounds, when the powder would be difficult to apply, Mikulicz recommends pencils composed of one part of iodoform to two of cacao butter, and for injection a 20 per cent. ethereal solution. The smell of the drug can be overcome by adding 1 M bergamot to 10 gr. of the iodoform, or moistening with an ethereal or alcoholic extract of Tonquin bean. Local irritation can be effectually prevented by previously oiling the sound skin near where the iodoform is to be applied.—*Glasgow Med. Journ.*, Jan. 1882.

The value of iodoform as an external application in venereal and syphilitic affection has led Dr. THOMANN of Graz to test its value in subcutaneous injection. He employed a dilution of six parts of iodoform to twenty of glycerin, and also a solution in almond oil. He commenced with doses of .3 gramme, gradually increasing the quantity to .75 gramme. In cases of early constitutional syphilis the symptoms rapidly subsided after ten or twelve injections in various parts of the body. No local suppuration was produced. A little pain was sometimes caused, which soon passed away. Rather more reaction followed the solu-

tion in oil, especially if the latter was not freshly prepared. An excretion of iodine by the urine could be demonstrated in the first two days after the injection, but no odour of iodoform could be perceived in the expired air, perspiration, or urine. The general health was not disturbed, and the dose employed had no narcotic action, and no effect on the temperature or pulse. Since iodoform is coming into increased use, it is well that the occasional occurrence of unpleasant symptoms from its employment should be known. Oberländer, some years ago, described a case in which a woman had taken forty-two grammes of iodoform in eighty days, and then had a sudden attack of giddiness, weakness in the legs, and double vision, followed by a period of excitement, interrupted by broken sleep, with headache, sensations of impending death, constant convulsive movements, and irregular respiration. After improvement, the resumption of the iodoform was at once followed by a relapse.

In a recent paper in the *Allgemeine Wiener Med. Zeitschrift* two cases in which an eruption was the apparent consequence of the external use of iodoform have been recorded by Zeissl. An ulcer on the leg of a boy three years of age was dressed with iodoform, the dressing being several times changed in the course of a fortnight. At the end of that time the temperature suddenly rose to 105° , and a diffuse erythematous eruption appeared on the flexor aspect of the upper part of each arm and the inner side of each thigh. The affected areas were bright red in colour, the intermediate parts of the skin being normal. The child was somnolent and vomited some greenish-yellow masses. On the third day after the removal of the iodoform the temperature became normal, and the exanthem gradually faded. During its existence the urine gave a distinct iodine reaction and contained some albumen and renal epithelium. The applications of iodoform being resumed, another precisely similar attack occurred, attended with the same elevation of temperature and albuminuria, disappearing five days after the cessation of the iodoform dressings. Ultimately, however, tolerance of the iodoform was established. In another case iodoform was applied to a fistula connected with carious bone. After a week the patient was attacked with an eruption like urticaria, sharply circumscribed prominent red spots surrounded by reddened skin. Some of the raised spots had a diameter of two centimetres. They were especially abundant on the flexor aspects of the limbs. The urine contained no albumen. The application of iodoform was discontinued, and the eruption subsided in the course of a week. With regard to the occurrence of albumen in the urine in the first case, Zeissl remarks that iodine in toxic doses has before been known to cause albuminuria; and that it is desirable always to watch the urine in cases in which iodoform is applied as a surgical dressing.—*Lancet*, Jan. 7, 1882.

Of the uses of iodoform in the treatment of soft chaneres, little or nothing needs to be said. It is generally acknowledged that, except in those rare cases in which considerable pain is produced, or in those rarer ones in which its application appears to excite inflammation, the mere dusting of the powder over the sore is almost sufficient to insure a healthy action. Its employment has certainly considerably reduced the duration of this disease, and has done away with the necessity of such painful applications as fuming nitric acid to the exquisitely tender surface. In the out-patient practice of a hospital the use of iodoform will soon banish that most offensive class of cases, the stinking ulcers of the leg. We have long been in the habit of using an ointment composed of iodoform, eucalyptus oil, and vaseline, which has the advantage of enabling the patients to keep their ulcers aseptic whilst changing the dressing themselves daily. It must be owned, however, that this ointment has occasionally set up a rather severe form of dermatitis, due possibly to the fact that iodoform, when dissolved in an essential oil, is apt to undergo decomposition into products of a very acrid nature. Another

excellent method of treating ulcers of the leg is to dust the powdered iodoform over them, and then to apply over the sore a piece of the oiled silk protective, and over this a mass of the iodoformized cotton. A firmly applied bandage securing this combines the advantage of a uniform and continuous elastic pressure with that of asepticity. If an ointment such as that described above be employed, and if the patient be directed to use a 5 per cent. carbolic lotion when changing the dressing, it will be found that many smaller abscesses will also remain quite aseptic, though the dressings be frequently changed between the times at which the patient is seen by the surgeon; but if this is to be attempted, it is advisable to incise freely, and thus dispense with the necessity of the drainage-tube. Very similar is the application of the drug to burns; an extensive stinking burn may be purified by a single application of the powder; we have ourselves employed it in such cases with the greatest possible benefit, and it may be remarked that if it be intended to dress the burn with protective and boracic lint (a most excellent application in such cases), the use of the iodoform gives this great safeguard, that, supposing a spot of putrefaction be left beneath the protective, or putrefaction spread inwards beneath the edge at the part from which the greater part of the discharge escapes, the mischief does not extend itself, but is limited or subdued by the iodoform in its neighbourhood. In this connection it may also be observed that it is extremely useful in cases of otorrhœa, ozena, ulcers of the septum nasi, etc. In the treatment of these diseases it may be applied either alone or in combination with any other powder, the employment of which the particular case may render advisable - bismuth, tannic acid, oxide of zinc, or what not. It is easy to blow the powder up the particular part in question, and we would suggest that by means of a speculum it might be used in a similar way in the treatment of vaginitis, though we do not profess to speak on this subject from experience; it may be suggested, however, that a plug of iodoform cotton, inserted into the vagina, might enable the surgeon to perform a strictly aseptic abdominal section in a case where it was impossible to avoid interfering with the vagina or the uterus.

The iodoform cotton is an introduction from Germany; and consists of absorbent cotton-wool which has been thoroughly impregnated by means (we believe) of soaking it with an ethereal solution of the drug. An absorbent lint has been prepared in the same way. This may be advantageously applied to a variety of wounds and sores; but its efficacy is particularly manifested in wounds about the perineum, say, *e. g.*, a hernia. Thus the operation may be performed with the strictest antiseptic precautions, but instead of putting on a gauze dressing, the parts are enveloped in a mass of the cotton, a wise precaution being to previously smear the surrounding hairs with some iodoform ointment. If the stitches are of catgut the dressing may be left on for a week, at the end of which time the drainage-tube may be removed; the stitches, if they have not become absorbed in their deeper parts, may be either taken away or left, as desired, and the second (which will probably be the final) dressing applied. It cannot fail to be observed that this greatly increases the possible field for the performance of antiseptic operations in the country.

The Germans are using the drug in a most wholesale way—we had almost said reckless, because it seems very doubtful whether its use is advisable in many of the cases for which they now employ it, and still more doubtful whether these very large amounts are any more efficacious than smaller quantities; while it is certain that several cases of death have been reported, some of which probably, and others certainly, were due to its toxic effects. We need not again refer to the character of the symptoms of iodoform poisoning; but we shall have done enough to justify our first proposition when we say that cases are on record where,

after scooping out a cavity in a carious bone, as much as 120 grammes were placed in the whole (which, it will be remembered, represents 1800 grains), and even larger quantities have, we believe, been introduced. A good idea of the way in which iodoform is being used will be gained by reading an elaborate article by Mikulicz in *Langenbeck's Archiv*, xxvii. page 196, which describes the state of things at Vienna. It is there stated that it is not only employed in such cases as those we have described, but to operation-wounds which involve any of the cavities of the body, and also to all recent wounds whatever. For the former class of cases, as well as in some others, it has been found useful to make the iodoform into a paste with resin or some other substance; this can be inserted into a sinus or packed into a cavity, such, *e. g.*, as a wound in the mouth. A similar use of the drug was, it will be remembered, made by Mr. Watson Cheyne in his iodoform bougies for gonorrhoea. The advisability of its application to recent wounds we venture very seriously to doubt. Indeed, while fully appreciating the immense utility of the drug, we think it quite possible that enthusiasm in its favour is carrying our German brethren too far. It is not quite clear whether its antiseptic qualities are really equal to its disinfecting power, and we must be careful how we trust too blindly to it in this respect; some experiments by Mikulicz himself are sufficient to raise a doubt on this point. He mixed the powder with samples of various putrescible fluids, and stirred them up daily, and yet he found that, though much delayed and diminished, fermentative changes took place in these fluids unless the proportion of iodoform was, comparatively speaking, large. Again, it has been assumed that iodoform exerts a specific action upon the tissue of lupus or tubercle; this has led to its very free employment to the scraped surfaces of supposed tubercular disease of joints and bones, and to lupous affections of the face, etc. That it is very useful in such cases none can doubt, but that its wholesale employment is to be recommended is very doubtful indeed; and that it exerts this specific action is now not maintained by many who some time ago were very positive upon the point.

More might be added, but we have reached the limit of our space, and, in conclusion, would repeat the word of warning—we are not yet fully aware of the true antiseptic qualities of iodoform, and we do know that it does under certain circumstances produce very serious, and, indeed, actually fatal results. Of its internal administration we can say nothing from personal experience, and, therefore, will not venture upon this part of the subject.—*Med. Times and Gazette*, Jan. 14, 1882.

MEDICINE.

Case of Acute Miliary Tuberculosis exactly simulating Typhoid Fever.

SENATOR details in the *Berl. Klin. Woch.* (June 20, 1881) the case of a male patient, aged 42, a messenger, who had all the appearances of typhoid fever (including rose-coloured spots), but *post-mortem* was found to have been suffering from generalized miliary tuberculosis, the Peyer's patches being unaffected. He had been in the hospital before for severe typhoid fever, from Sept. 25 to Nov. 5, 1877, and was discharged cured; well in the interval. In the first days of Sept. 1880, he was taken with slight shivering, pains over the liver, and dyspnoea, and was several days in bed. Afterwards, he had weakness, loss of appetite, and feeling of fullness in the epigastric region. These symptoms increased ten days before his admission, and the pains over the liver especially so. There