Clinical Department.

A NOTE ON BISMUTHUM TRIBROMPHENYLICUM AS A SURGICAL ANTISEPTIC.

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It is difficult to pass an opinion regarding the real value of an antiseptic, because bacteriological experiments are not always in accord with the clinical results obtained. Such, for example, is iodoform, which theoretically is without value, while practical experience demonstrates its great virtues.

The phenols, such as carbolic acid, the chlorobromo- and iodo-phenols, cresol, pyrogallol, naphthol, etc., are the most powerful antiseptics, after those of the mineral series, but their use is limited on account of their toxic and caustic properties. These defects disappear if H₂O is replaced: example, phenol and salicylic acid give by their combination salol.

The reason why salol and other like products give such excellent results when applied to wounds or the mucous membranes is because they split up into their constituents in a *slow and continuous* manner, so that when a large surface is covered, the toxic and caustic action of the creosote or carbolic acid does not occur. The phenolates of bismuth easily decompose in presence of the organic liquids, and the amount of phenol liberated is sufficient to give excellent antiseptic results.

Of all the groups of antiseptics, bismuthum tribromphenylicum, or as it is also termed "xeroform," is recognized as the most active: first, because it contains, besides 49 per cent. of oxide of bismuth, 50 per cent. of tribromophenol, while other products only contain from 10 to 20 per cent. of phenol, cresol or naphthol; and, secondly, tribromophenol is more antiseptic than phenol.

Bismuthum tribromphenylicum has for chemical formula $C_6H_2Br_3O-Bi-O$, and is rapidly decomposed by acids and bases, especially when heated. But, on the contrary, it may be heated to 110° C. without decomposing and is thus superior to iodoform because it can be *sterilized*.

It is a fine, yellow, neutral powder, which does not decompose when exposed to light; its odor is slightly carbolic; it is tasteless and does not irritate the mucous membrane of the digestive tract.

Little has been written regarding the surgical applications of this product; but there is no doubt in my mind that it has a large field of usefulness in surgery. In open wounds, those in which no infection has taken place, the tribromophenol of bismuth will secure union by first intention. It appears to exercise a calming influence on burns, like iodoform. In cutaneous affections with secretion of pus, such as impetigo and sycosis, the results obtained with this preparation were not satisfactory. In some cases of *pruritus localis sine materia* the itching was stopped by the application of this product. When applied after the curettement of tubercular abscess or glands, cicatrization was rapid.

On account of the continual development of tribromophenol and oxide of bismuth, a wound will be kept in a perfectly antiseptic condition, while the slightly irritating action of the former gives a fresh and healthy aspect to the wound.

One of the properties of iodoform is to produce granulation tissue; tribromophenolate of bismuth and other antiseptics, such as airol, euophen, iodol, etc., do not have this quality to such a degree; consequently in order to cause granulations to spring up, iodoform should be first applied, and cicatrization can be accomplished with the bismuth product. This method I tried with success in two cases of fistula in ano after having freely opened, excised and curetted the fungous masses.

My experience with the product under consideration amounts in all to twenty-six cases, as follows: five cuts of the extremities requiring from three to twelve sutures; one ulcer molle; two operations for bilateral laceration of the cervix; seven curettements for acute gonorrheal endometritis; two cases of vaginitis; three operations for tuberculosis of the bones; one abdominal hysteropexy; one tubercular abscess of neck; one sub-aponeurotic abscess of axilla, one appendicitis; and two operations for fistula in ano.

In all these cases it appeared to me that this powder gave more satisfaction than I have ever had with iodol, euophen, iodoform or tincture of iodine, all of which I have thoroughly tried. In the gynecological cases it appeared to me that this product had a marked influence on the regeneration of the epithelium.

In no case did I meet with any toxic symptoms, although in the cases of tuberculosis of the bones and tubercular abscess of the neck in a child eleven months old I applied the powder very freely in the wounds.

In closing this short note I would strongly recommend this substance to the profession as a safe and sure antiseptic, and in many respects superior to iodoform or other powders of this class.

THE STIMULATING TREATMENT OF PNEUMONIA.

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In the *London Lancet* of April 4th of last year, was an interesting paper by Dr. Squire, strongly advocating the stimulating treatment of pneumonia, in which a hospital case was cited in illustration of its efficacy. The patient was "so far gone" that the physician in attendance gave him up as in a hopeless condition. The interne and the nurse, however, determined he should not die if they could help it, and accordingly plied him with brandy, as much as they could get down. The result was that he took in twenty-four hours thirty-two ounces of brandy, with decided benefit, and following up the treatment the man got well. A good abstract of the paper is published in the *Therapeutic Gazette* of August 15th.

This case brings very forcibly to my mind one under my care in the Massachusetts General Hospital some years since. The patient was a respectable young woman, eighteen years old, who at the time of her admission, was suffering from double pneumonia, the lower half of both lungs being solidified. She was of course in a very critical condition, requiring that she should be held up by all the means that could be employed. She absolutely refused, however, to take any form of nourishment, even milk. Happily, she did not object to stimulants, so I directed the nurse to give her as much good French brandy as she could