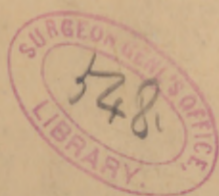


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Acetanilid as an antiseptic

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ACETANILID AS AN ANTISEPTIC SURGICAL DRESSING.

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For the past five months, since the appearance of Morton's paper, (The Phila. Polyclinic, Feb., 1895), I have been employing acetanilid in surgery as a substitute for iodoform and its various combinations. Its use has been so satisfactory that it is with pleasure this little clinical note is written and my testimony is added to that of others who have written in laudatory terms of the drug.

When applied to a wound it produces intense dryness, but no complaints have been made of a burning sensation when the drug has been applied alone; but when boracic acid is added this sensation is often complained of to a marked degree.

We have used the drug in the following combinations: various percentages of acetanilid with boracic acid, from 25 per cent to 80 per cent of the former; the pure powdered acetanilid; five and ten per cent gauze; alcoholic solution and the drug suspended in normal salt solution.

I have not used it with liquid petroleum, 40 grs. to the ounce, or with ether or chloroform. Suspended in water it serves well for injection into abscesses or sinuses. In ordinary cocoa-butter suppositories it is very efficacious in rectal affections, ulcers, or inflamed hemorrhoids.

In the following cases we have observed most gratifying results: A tuberculous abscess in Scarpa's triangle in a boy; tuberculous abscess of cervical glands; an extensive breast amputation for carcinoma in which it was necessary to sacrifice a great deal of tissue; gunshot wound of the gastrocnemius; subra-pubic lithotomy in which a necrotic fat abscess formed on the thirteenth day; hemorrhoids, rectal ulcerations and fissures. It will be seen by this list that the drug has been freely tried under many different conditions with success. There are, however, a small minority of cases in which acetanilid cannot be used just as some persons will not tolerate iodoform or any of the iodine compounds. In my experience I have met with two such cases. One was an amputation of the ear for epithelioma of the helix and the other was an abscess of the maxillary sinus (empyema of the antrum of Highmore). These were both elderly men, the former was aged seventy-three and the latter eighty-four. In these men acetanilid seemed to produce a deal of irritation and to delay granulation. I have had a similar experience several times with iodoform.

We use the powder very freely and in a large number of cases have not observed any toxic effects; Morton in a much larger series has noted toxic effects but twice. One case in an infant aged fourteen months, in whom excision of hip had been performed for tuberculosis and the wound packed with acetanilid; in four hours the temperature dropped five degrees; great pallor and feeble pulse. The temperature rose and symptoms disappeared upon withdrawal of the drug. The second case was one of extensive suppurative superficial scald. At twelve o'clock



eight grammes of finely powdered acetanilid was dusted over the surface; at five p. m. the patient presented grave toxic symptoms; all acetanilid was at once removed, digitalis and whiskey were exhibited and by midnight he was in a normal condition.

Soper, (*Medical World*, Vol. XIII, No. VI, 1895, p 216) of the Sydenham Dispensary, New York, has used it with a very free hand and has observed no effect upon the temperature. He calls attention to the fact that it appears to do well up to a certain point, and then, as it were, to lose its grip, as he expressed it; he also states that the necessity of forcibly removing the crust and finding a collection of pus under it is unfavorable.

I have as already stated, observed the first condition as stated by Soper, but considered it due more to the advanced age of the subjects than to any want of response on the part of the drug. The latter condition I have never met with; when the crust was removed the granulating surface was always intensely dry as stated by Morton. In the cases in which the drug seemed to lose its grip this dryness persisted but the wound area did not decrease.

Harrell, *Medical News*, Oct., 1893; Hand, *Ibid*, Vol. LXIV, p 269; and Knowles *Ibid*, Vol. LXIV, p 419, all speak in the strongest terms of the efficacy of the drug, the former states that the wounds heal quickly even after coal dust and other foreign matter had gained entrance.

It will be seen that the drug has a very wide application, and in most cases it will prove so satisfactory that it is difficult to restrain one's self from speaking too enthusiastically. It is, however, entirely safe to say that in acetanilid we have an addition to our surgical armamentarium which is quite equal to and indeed superior to iodoform without its objectionable odor; that is no more dangerous than iodoform and that it may possess the ability to render the skin sterile preparatory to operative procedures. This, however, will require further study and microscopic investigation into the ability of acetanilid to destroy the staphylococcus epidermitis albus.

ADDENDUM.—Since hastily writing the above the recent laboratory work of Frothingham and Pratt (*Amer. Jour. Med. Sci.*, August, 1895,) upon the anti-bacterial action of acetanilid has come to my notice. These experiments show that the inhibitory action of acetanilid is much more marked in the one per cent. than in the 5 per cent. tubes. The growth of the bacillus pyocyaneus is much more affected by the presence of acetanilid than the other organisms.

The experimenters conclude as follows: Although acetanilid has not been very widely employed as a surgical dressing, in the cases where it has been used the results have been so successful that its superiority over iodoform seems very probable, and its use instead of the latter indicated.

Laboratory experiments uphold the clinical proof of its value as a surgical dressing, and the conclusions which the experiments teach are:

1. That acetanilid is probably to a very slight extent a germicide.
2. That acetanilid is decidedly an antiseptic.*
3. That, as an antiseptic, acetanilid is far superior to iodoform, and that certainly from a laboratory, and probably also from a clinical, standpoint its substitution for the latter seems warranted.

Their experience is contrary to that of some other observers, in that they state that there is no danger of poisoning from the absorption of acetanilid.

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*In this connection it is perhaps well to remember Sternberg's definition: "Antiseptics restrain the growth of micro-organisms which produce septic decomposition without destroying their vitality. Disinfectants destroy the germs of infectious diseases. Germicides are an extended term of the latter, agents that kill non-pathogenic bacteria as well as disease germs."

