Preliminary Report*

A. CONTACT TESTING OF THE VAGINA WITH VAGINAL SUPPOSITORIES CONTAINING PENICILLIN

B. THE THERAPEUTIC USE IN DERMATOLOGY OF VAGINAL AND RECTAL SUPPOSITORIES CONTAINING PENICILLIN

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Preliminary and Short Reports

The therapeutic evaluation of vaginal penicillin suppositories has been studied for more than a year by Pierce in the Department of Obstetrics at the Cincinnati General Hospital. Because of the adequate serum levels of penicillin which he obtained in his study, we became interested in the use of these suppositories in various dermatological conditions. We were concerned also with the actual and potential sensitizing properties of penicillin for the vaginal and for the rectal mucosa.

Our preliminary study included thirty patients, ambulatory and hospital, nineteen dermatological and eleven non-dermatological. The suppositories were approximately 3½ cm. in length and ½ cm. in diameter. They contained 100,000 units of penicillin in a base consisting of cocoa butter, a small amount of bismuth subcarbonate and enough beeswax for firmness. These suppositories were stable at room temperature for a minimum of several months, showing no change after two months at room temperature. The suppositories were inserted easily in the rectum of young children, although fatty masses appeared in the stools of young children even after three to four hours. Serum levels were determined in three patients. In one patient after a rectal suppository the levels of penicillin per cc. of serum were as follows: 0.015 units at one half hour and at one hour, 0.03 at three hours and 0.25 at five hours. In another patient with a vaginal suppository the levels were 0 at one-half hour and one hour, 0.06 at two hours and 2.0 at seven hours. No reason was offered by the Anti-Biotic Laboratory for this paradoxical figure. Although the third patient had an excellent therapeutic response, no penicillin was found in her serum at intervals varying up to five hours after a vaginal suppository. Absence of detectable penicillin in the serum does not necessarily mean absence of therapeutic response.

We have had no reaction, either local or general, in any of the thirty patients. The suppositories containing penicillin were used over an average period of one week. Pierce, whose experience with vaginal suppositories of penicillin now includes almost one thousand patients, has never seen a local or systemic reaction with one or two suppositories inserted post partum and in a few instances in repeated doses, for vaginal infestations with trichomonas. Perhaps in his study, the relatively brief period of contact with the vaginal mucosa plus other factors associated with the post partum period may serve to prevent a contact vaginitis from penicillin.

Attempts were made to patch test the vaginal mucosa by means of a solid rubber nozzle modeled after a douche applicator. On one side was an indentation into which a single

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penicillin suppository would fit. (Figure 1) The nozzle was placed into the vagina and held in position by means of a T binder or cloth strings tied directly to the base of the nozzle and attached to another binder encircling the abdomen. Five patients have been tested in this manner and each received five or six penicillin suppositories in the same slot, and consequently on the same general region of the vaginal mucosa, throughout a forty-eight hour period. The vaginal mucosa was examined prior to the insertion of the suppositories and again after they were discontinued. In no case was there evidence of local sensitization. No cutaneous or buccal mucosal contact tests were done.

Penicillin suppositories, in the dosage used, seemed to have a good therapeutic effect in all except a patient with syphillis vulgaris, and here, both sulfadiazine and superficial x-ray therapy afforded only temporary beneficial action. The group under treatment consisted of a variety of conditions, including erysipeloid of Rosenbach and early syphilis. It is not known what the ratio of dosage of vaginal suppository (or rectal suppository) to intramuscular penicillin will be. In this preliminary series, excessive dosage was employed deliberately.

CONCLUSIONS

Attempts were made to do contact testing of the vaginal mucosa by means of a rubber vaginal nozzle with a slot for the insertion of a suppository containing penicillin. Five to six suppositories were inserted repeatedly in the same slot during a continued forty-eight hour contact period. No local reactions were seen in five patients tested. Preliminary experiences in nineteen dermatological and eleven non-dermatological patients, with rectal and vaginal suppositories containing penicillin indicated that a good clinical response was obtained in most of our patients. From this data, it appears that penicillin may be absorbed readily from both rectal and vaginal suppositories. Therapy with suppository penicillin may provide a type of effective ambulatory penicillin therapy. Additional work must be done to determine factors affecting absorption, adequate dosage, etc.