REPORT OF A CASE OF BACILLARY DYSENTERY WITH DIPHTHERITIC MEMBRANE IN THE VAGINA AND EDEMA OF THE ABDOMINAL WALL

I. I. LEMANN
New Orleans, Louisiana

The points of interest in this case are indicated in the title of the paper. These points have seemed of sufficient importance to warrant this report because none of the standard texts mention them and apparently they have not previously been described in the literature.

Mrs. A. O. was seen November 15, 1919, at Touro Infirmary in consultation with Dr. W. P. Bradburn through whose courtesy I am permitted to make this report. The patient was a white married woman of forty-eight years. On November 3 she had eaten a cream puff which did not seem fresh. The next day she had severe pains in the epigastrium and loose bowels with straining. On November 5 nausea began. All symptoms increased until November 10 at which time she was first seen by Dr. Bradburn. At that time Dr. Bradburn described her as being in a state of collapse; the surface covered with a cold perspiration, the pulse weak and rapid. There was slight rigidity of the upper abdomen and apparently a mass about the size of an orange in the epigastrium. This apparent “mass” disappeared within a few days. After her admission to Touro Infirmary November 10, she was given glucose and sodium bicarbonate each 5 per cent solution by proctolysis, calomel grain $\frac{1}{2}$ every two hours and later paregoric 31 every three hours. No food was given, only water being allowed. When first seen by me, November 15, she had improved but her face was still somewhat pinched, the temporal fossae were sunken and the general appearance was that of great prostration. The bowel movements had continued to be numerous, bloody and mucous, and extremely offensive. Patient had vomited once though she suffered greatly from nausea. There was marked edema of the

1Published in the J. A. M. A., December 18, 1920.
abdominal wall, slightly greater in the upper right quadrant. The patient finched slightly when pressure was made in the liver region but the abdomen in general was not tender. The liver edge was felt three fingers breadth below the costal margin on deep inspiration. The heart and lungs were negative. At the introitus of the vagina a roughened, corrugated elevation was felt. The vaginal walls, vault and cervix felt edematous. On inspection with the speculum the rough, corrugated elevated area proved to be due to a thick, tenacious, dirty-grey membrane which was pulled off with difficulty and left a superficial bleeding ulceration. On the cervix there was also an erosion and membrane. Rectal examination (digital) revealed nothing abnormal. The patient's blood gave a strong agglutination with the Shiga bacillus. Dr. John A. Lanford, pathologist of Touro Infirmary was also able to recover Shiga bacilli from cultures made from the vaginal pseudo membrane and from the cervix. Other laboratory examinations were without special interest. The blood showed a moderate leucocytosis (17,000) with 85 per cent neutrophiles. The urine had a trace of albumen and a heavy indican. The feces revealed no parasites and no ova. There were pus, blood and epithelial cells present. The stools were copious, liquid and offensive.

In addition to supportive measures, the principal features of the treatment were:

1. Liquid diet without milk.
2. Sodium sulphate solution daily into the duodenum by means of the Jutte tube.
3. Irrigations of the vagina three times daily with 1:1000 permanganate solution.

Improvement began almost at once. Practically all symptoms had disappeared in three weeks and by the end of the month (December 15), the patient had entered fully into convalescence. In February, 1920, Dr. Bradburn reported her in perfect health in every way.

It will be noted that the croupous pseudo membrane in the vagina in this case corresponds exactly with those universally described as occurring in the bowel of dysentery patients; in other words the bacilli seem to act upon the vaginal mucous membrane as they do upon the intestinal. The question arises as to the manner in which they were introduced into the vagina. The most plausible explanation would seem to be that the
contamination was directly from the rectal discharges by proximity, especially as the inflammatory process was most extensive and intense at the introitus and seemed to be ascending. Or the infection may have been by contiguity within the pelvis. In this connection it seems pertinent to cite the opinion of Flexner and Sweet (quoted by Castellani and Chalmers) as to the mode of production of the pseudo membranes in the bowel. They claim that the bacilli may abound in the small intestine where no pathological lesion may be found but they give rise to toxins one of which acts on the lower bowel, the other on the nervous system. The excretion of the first toxin causes an exudation of lymph into the submucosa and later into the mucosa. This lymph coagulates and is invaded by a cellular exudate and in due course the glands and the tissue of the mucosa and muscularis mucosae are destroyed by coagulation necrosis with thrombosis of vessels. If the ulcers of the lower bowel and the false membrane there are produced by the excretion of this toxin, it might be asked whether this vaginal condition could be produced in the same way. Another theory may be suggested, namely, that the infection was carried to the vagina by the bloodstream. Cases of bacillary dysentery septicemia have been reported (Markman, Rosenthal—quoted by Castellani; de Sautelle, J. A. M. A., 1914, 63, p. 1853). However there was nothing else in our patient’s condition to warrant such a supposition. Unfortunately no blood culture was made.

I have no explanation to offer as to the production of the edema of the abdominal wall. Its appearance was analogous to the edema frequently noted on the thoracic wall over empyemata and over abscesses of the liver.