

for all goodness and beauty but congenitally he had a blind spot for the dark disagreeable and unpleasant qualities of men and things. Through habit of mind this blind spot seemed to have enlarged still further. His birth and his judgment made him a strong pro-ally; nevertheless he was not blind to the good side of Germany and the Germans.

Perhaps Walter Dodd will be most pleasantly remembered in connection with our leisure hours. Whether on an excursion, at the various gatherings, at the dinner table, or in his tent he was almost foremost in honest fun and wholesome cheerfulness. Nature endowed him with an agreeable singing voice which one likes to think was made richer and sweeter by his own character. He was always active in getting the men together for an informal session of songs. We forgot his infirmities as he would have us forget them. Our recollections are not at all the recollections of a tragic figure who had experienced with a glorious fortitude years of suffering for the benefit of science and humanity, or who had endured with complacent calmness many mutilating operations. Our recollections are and will be those of a happy, cheerful, humorous soul who looked upon the world and its products with a kindly eye and generous, who saw good in everything and everybody. In his presence everything and everybody was good. We recall one who was full of the joy of living and who loved life.

### Clinical Department.

#### THE MUCOSA OF THE RECTUM AND SIGMOID COLON AS A FOCUS OF INFECTION.\*

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MANY reports are appearing in the literature relative to foci of infection in the respiratory tract and the genito-urinary system. Billings in his admirable work on focal infection refers briefly to pus infections occurring in the hemorrhoidal veins and the anal canal. I wish to direct special attention to infections of the mucosa of the rectal and sigmoidal regions, inasmuch as my experience reveals that such localized inflammatory processes are quite common, often escape recognition for years and are etiologic factors in the production of systemic disease. I do not include in this report abscesses and other conditions about the anal canal and hemorrhoidal veins requiring surgical aid. Luetic, tubercular and amoebic ulcerations are also excluded. The paper is, therefore, limited to a consideration of the primary infections of the mucosa of the rectum and sigmoid by pyogenic micro-organisms, the resulting systemic effects, the subjective symptomatology, and finally to the changes pro-

duced by direct local treatment. Fifty cases were studied, varying in intensity from mild non-ulcerative infections of the ampulla recti to severe ulcerative processes involving the entire rectum and a part of the sigmoid colon. Illustrative abstracts of case histories are here presented which may serve as examples of the various groups.

CASE 1. Male, aged 49; height, 5 ft. 11 in.; weight, 165 lbs; tuberculous family history. Chief complaints: rheumatic pains in joints and various muscles for the past two years. For five years has had irregular bowel actions, usually three or four small, inadequate passages daily. Has had dull headaches, lassitude, inability to concentrate. Eyes, ears, nose, throat, and teeth had been looked after by competent men without detecting a focal infection. Blood pressure, 152-90. Urine showed a trace of albumin, many cylindroids, indican. Wassermann negative. Feces: many small clumps of mucus mixed with pus cells.

Procto-sigmoidoscopy revealed a very tightly contracted rectum. The mucosa of the ampulla recti was deep red, thickened, and covered with thin feces, in which were many clumps of mucopurulent material. Culture showed the presence of many gram-negative bacilli, a few gram-positive bacilli, many staphylococci, no streptococci. No tubercle bacilli were found.

Treatment. Insufflation of calomel powder through the rectal tube. He improved rapidly and the feces became normal in four weeks' time. Rectum free from mucus and pus.

A month later he returned with a relapse, the mucosa showing the same sort of infection as before. The wrists and fingers were distinctly swollen. After two weeks' treatment he again improved, and is apparently in a normal condition at the present time, six months after treatment was instituted.

In this group are found the cases usually diagnosed as auto-intoxication and neurasthenia. However, sigmoidoscopy revealed that an infectious agent was responsible for the condition. Twenty cases, varying in age from twenty-one to forty-nine, were observed.

CASE 2. Female aged 43; height, 5 ft. 8 in.; weight, 123 lbs. Two children. Chief complaints: constipation as long as she can remember. For the past ten years has had rheumatic pains and swelling of the finger joints, backache, and especially severe headaches of migrainous type, occurring two or three times a month. Recently they were so severe that codeine and morphine were given hypodermically to control the attacks. Eyes, teeth, nose and throat had been carefully looked after by competent specialists. Had an operation for hemorrhoids two years ago. Her diet had been carefully regulated without any influence upon the headaches. Wassermann negative. Examination of urine and blood revealed nothing abnormal. Feces showed the presence of mucus, red blood cells, and pus cells. No culture made. Smear showed presence of diplococci and staphylococci. No gonococci. No tubercle bacilli.

The sigmoidoscope disclosed the presence of a general catarrhal condition of the entire mucosa

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of the rectum, extending to the plicae sigmoideae. The membrane was much thickened and covered with small clumps of mucus and purulent material. The scar tissue from the hemorrhoidal operation caused considerable contraction of the anal canal.

Dilatations and daily treatment by calomel insufflations for six weeks, together with the use of oil enemata, finally produced normal, daily bowel movements, subsidence of the local inflammatory process and freedom from the attacks of headaches. No recurrence for the past twelve months.

The cases in which migrainous headaches and spastic constipation were the predominant symptoms were twelve in number. Eight showed the same striking improvement as the one described. In two cases the headaches recurred at longer intervals and were milder in type. In two the constipation was relieved but the headaches persisted.

**CASE 3.** Female, aged 35; height, 5 ft. 3 in.; weight, 110 lbs.; single. For ten years had trouble with bowels,—irregular, constipated, sometimes diarrhea after eating fruit. Severe diarrhea and cramps after taking purgatives. For the past four years has been an invalid. During this time had suffered four surgical operations: first, pus appendix; second, ovarian abscess; third, empyema of the gall-bladder; fourth, excision of gastric ulcer. Chief symptoms are almost constant occipital headaches, pains in joints (no swelling), pains in muscles, extreme nervousness, insomnia. Blood pressure, 100-80. The urine showed albumin and casts. Otherwise the kidney function was good.

Sigmoidoscopy showed a marked hemorrhagic pus proctitis limited to the ampulla recti. The entire membrane was much thickened and covered by a thick layer of bloody pus. No gonococci or tubercle bacilli were found. Culture showed bacilli coli, staphylococci and streptococci. It required six weeks' daily local treatment of calomel powder completely to clear up the infection and restore the mucosa to a normal condition. She has remained well for the past year, gaining 20 lbs. in weight and is able to resume her work as stenographer.

Ten of the case series belonged to this group. In some of them there was a probability that there had been an original infection by gonorrheal pus. However, the gonococci could not be isolated and the inference was that a general mixed infection had persisted. All showed sequelae such as appendicitis, cholecystitis, gastric and duodenal ulcer and kidney disease. A curious feature of this group is the tendency to hemorrhage. One case which was seen in consultation with Dr. Hugo Ehrenfest had several severe rectal hemorrhages.

**CASE 4.** Female, aged 64; height, 5 ft. 5 in.; weight, 112 lbs. Has suffered from arthritis deformans for twenty years. Joints of hands, wrists and shoulders affected. Has had many attacks of neuritis. The chief subjective symptoms were much intestinal gas, cramps, alternating constipation and diarrhea. Blood pressure, 180-100. Heart considerably hypertrophied; general sclerosis of arteries. Kidneys showed considerable impairment,

probably chronic interstitial nephritis. Feces showed small, bloody muco-purulent clumps.

The sigmoidoscope revealed an ulcerative proctosigmoiditis involving the entire rectum and two inches of the sigmoid. Purulent material was negative for tubercle bacilli and gonococci. Culture showed many gram-negative bacilli, many diplococci and streptococci.

It required two months' local treatment to restore the mucosa to a normal condition (insufflations of calomel three times weekly). The joints are less painful, but otherwise unchanged. She gained in weight and strength and the bowel function is good.

Seven cases were observed in which chronic interstitial nephritis and arthritis deformans were the predominant lesions. All showed much improvement in general nutrition and amelioration of the subjective symptoms with but little change in the joint conditions.

**CASE 5.** Female, aged 26; height, 5 ft.; weight, 95 lbs. Dates trouble from attack of typhoid fever ten years ago. Bowels much constipated. Defecation always painful, more so after laxatives. Has suffered from attacks of dyspepsia, nervous symptoms and loss of weight. Has often had low fever lasting for weeks. The examination of the urine showed a trace of albumin, hyaline casts, trace of sugar, strong indican and weak acetone reactions. Feces consisted of a small amount of fecal matter mixed with a mass of pus and blood. Wassermann negative.

**Sigmoidoscopy.** The entire mucosa of the rectum and the first three inches of the sigmoid is involved in a severe chronic ulcerative process. The wall of the bowel and mucosa is much thickened and covered by a thick, bloody pus. Culture showed a mixture of gram-negative and gram-positive bacilli, staphylococci and streptococci. No tubercle bacilli and no typhoid bacilli could be identified.

X-ray examination showed an absolute stasis in the transverse colon. The bismuth meal was retained here for one week. The x-ray diagnosis was, therefore, an obstruction, probably in the splenic flexure.

**Treatment.** Daily insufflations of calomel caused steady improvement, and in eight weeks' time the mucosa was in a normal condition. She gained 17 lbs. in weight, and all nervousness and headaches disappeared. Re-examination in October last showed no return of the infection and her health was fully restored. Bowel function normal. The colonic stasis was evidently due to a spasticity at the splenic flexure, and not to a true stenosis.

This case was unique inasmuch as it followed an attack of typhoid fever. She was probably not a carrier as no cases have occurred in her family.

The consideration of these cases raises an important question: is the inflammation limited to the rectum and sigmoid, or is the entire colon involved? In the cases here presented the return of the mucosa to a normal condition, a view of normal membrane higher than the diseased area and the absence of pus or mucus in the feces were taken as evidence that the lower colon alone was involved.

Cases of general colitis were encountered which were treated by other methods, notably autogenous vaccines. They are reserved, however, for a subsequent report.

In a considerable number of cases, not here reported, the incidence of pyorrhea alveolaris, pus proctitis and gastric or duodenal ulcer was noted. They were omitted in this paper as it was difficult to determine which was the primary lesion.

#### SUMMARY

First: The lower colon is frequently invaded by pus-forming organisms. The infection is mixed in character and exhibits an extreme degree of chronicity. The resulting systemic disease varies from merely nervous disturbances, headaches, and constipation to pus infection of the appendix and gall-bladder, gastric ulcer, arthritis deformans, and chronic kidney disease.

Second: Treatment by dry powder insufflation method of Rosenberg is extremely efficacious. Calomel is the powder of choice for local use as it adheres well to the mucosa and cannot be easily dislodged. It is non-irritant and may be applied to the sensitive mucosa of the anal canal without producing pain. There is no danger from absorption. Not a single case of systemic disturbance followed the daily use of large quantities. Finally, calomel has probably more antiseptic power than any other available powder.

Third: In the search for foci of infection, the lower bowel must not be neglected. *In fact no general examination of a patient is complete without procto-sigmoidoscopy.*

### A CASE OF MELANOTIC SARCOMA ARISING IN THE EYE, WITH METASTASES; AUTOPSY FINDINGS.

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THE patient was a white woman, aged 30, admitted to the medical service of Dr. Bertram L. Bryant on March 6, 1916, complaining of pain in the right lower thorax.

**Family History.** Unimportant. One sister has been treated for "nervous trouble" at the Bangor State Hospital (for insane).

**Personal History.** Health has been good, with the exception of "acute rheumatism" five years ago, from which she made a good recovery. Patient does not remember about the diseases of childhood. She has borne three apparently healthy children and has had no miscarriages.

Four years ago (1912) patient had what her physician told her was a "hemorrhage into the retina." There was slight pain and indefinite disturbance of vision in right eye, coming on suddenly during labor. The trouble with the eye continued, and about one year after onset she consulted an oculist. Dr. H. T. Clough saw her at this time, and has kindly given a description of the condition as he saw it. There was an irido-cyclitis,

complete blindness, increased tension, and the fundus could not be seen. At the end of two years after the onset of symptoms, and after continued anti-syphilitic treatment had given no relief, the eye was removed. This was in 1914, about two years before the patient appeared at the hospital. During these two years the patient was well except for attacks of "sciatica."

**Present Illness.** One month before admission (about Feb. 1, 1916) there has been a persistent pain in right lower thorax, under the breast, becoming increasingly troublesome. There has been also loss of appetite without apparent emaciation, and patient has become very "nervous and depressed," feeling that death was imminent.

**Physical Examination.** Patient is a woman of short stature and very obese. The mentality is of a low grade, but memory seems clear. She is greatly worried over her condition. The breasts and abdominal wall contain a great amount of fat. The limbs show proportionately more in the proximal parts. There are no painful nodules. The skin is smooth, good color, and shows no abnormal pigmentation or moles.

**Eyes:** There is an artificial eye on right. Vision of left eye is good. Pupil reacts normally.

**Ears, nose, mouth and throat** show nothing remarkable.

The neck is very short. There are no palpable glands.

Chest examination is unsatisfactory because of the thick layer of fat. Breath sounds are distant. Over the lower half of right lung are heard a few fine moist râles, increased on deep breathing. There is no friction rub or tubular breathing. Over the left side the breath sounds seem clear.

**Heart:** There is no apparent enlargement. No murmurs are heard. The pulse is regular in force and rhythm, fair volume, 80 to the minute. Blood pressure: systolic 130, diastolic 80.

**Abdomen:** Examination is very difficult because of the excessive fat. Pressure over the lower ribs in front and in axilla on right causes pain. There is an indefinite resistance just below the costal border in front, suggesting the edge of the liver.

**Glands:** In both groins are felt glands .5 to 1 cm. in diameter. Cervical, axillary and epitrochlear glands are not felt.

Vaginal examination shows a lacerated cervix and perineum.

White blood count, 11,000.

Differential count with Wright's stain shows 73% of polymorphonuclear neutrophils, and 13% of small lymphocytes. In fresh and stained smears the red cells appear normal.

Wassermann test negative.

The urine showed on several examinations a specific gravity between 10.20 and 10.30. The color was yellow, and did not change on standing 24 hours. There was no albumen and no sugar. One examination, two days before death, showed cystin crystals. One phenolsulphonephthalein test showed an excretion of 63% in two hours.

X-ray examination of the chest showed diffuse opacity in both lungs. Bismuth plates of the abdomen showed nothing remarkable.

Temperature and pulse were normal on admission, becoming elevated during the last few days, when there were diffuse râles in both lower lungs. The terminal signs were those of broncho-pneumonia.