RECOVERY IN BRAIN SYPHILIS AFTER THE USE OF SALVARSAN

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The rapid and complete recovery in this case after the use of salvarsan seemed sufficiently unique to make the case worthy of record.

Patient.—F. M., aged 34, married, laborer, was admitted to the hospital Dec. 28, 1912. The family history was of no importance. The patient was moderately alcoholic and had been drinking rather heavily just before the onset of the present illness. He had a severe syphilitic infection in 1903 for which he was treated in hospital one year and discharged as cured. There were no further symptoms until the present time.

Present Trouble.—During December 1912, the patient had several of what he calls weak spells in which he became dizzy and confused, but did not fall or lose consciousness. Shortly after a hearty dinner, about 2 p. m. Dec. 28, 1912, without prodromes, he suddenly fell to the floor in a general convulsion lasting several minutes, which was followed by complete unconsciousness.

Examination.—On admission to the hospital, about 5 p. m. of the same day, the patient was in coma from which he could be partially roused with difficulty. He showed conjugate deviation to the left with nystagmus, small equal inactive pupils, and periodic winking. The respirations were of the Cheyne-Stokes type. The heart, lungs and abdomen were negative. There was a moderate amount of arterial thickening, but the pulse tension was not high. The patient had a flaccid paralysis of the left side with lost reflexes. On the right side the reflexes were normal. Projectile vomiting occurred with incontinence of urine and feces.

Course.—During the night the coma cleared up. After 3 a. m. the patient was restless and irrational a part of the time with periods of semistupor. The pupils were now unequal, the right being larger and reacting sluggishly, the left still small and inactive, with no deviation or nystagmus. All the reflexes were normal with no sign of paralysis.

From the sudden onset and transient nature of the symptoms in a young man, with the history, obtained at this time from the patient's brother, a tentative diagnosis of cerebral syphilis was made, probably an encephalitis with localized exudation. The Wassermann reaction was reported positive December 30. December 31 the patient had again lapsed into coma from which he could hardly be roused, muttering incoherently when questioned. His condition was rapidly becoming worse; the pulse becoming more rapid and weaker with slight cyanosis of lips and finger-tips; the breathing was markedly Cheyne-Stokes. There was slight rigidity of the neck and extremities but no paralysis. The spinal cord was tapped and 40 c.c. of perfectly clear spinal fluid obtained under considerably increased pressure. A cell-count of this showed a slight increase in the total number of cells, the change being chiefly in the epithelial cells.

Treatment and Result.—The man's condition seemed desperate so that in spite of the contra-indication to the use of salvarsan in acute brain syphilis, it was decided to give him the benefit of the doubt. Accordingly, December 31, 0.4 gm. of salvarsan was given intravenously.

The next day his general condition seemed slightly improved but mentally he was the same. On the second day (Jan. 2, 1913) there was noticeable improvement. He was conscious part of the time, answered questions as to his condition clearly, insisted on feeding himself, and used both hands equally well.

From now on the progress was rapid and constant. At first he was drowsy a good deal of the time and when awake noisy, alternating between hilarity and depression. The following week he was very voluble with silly fabrications. January 25, he was permitted to get out of bed and on the 29th was walking about the ward quite himself, rational all of the time, and completely oriented, with fair memory of events immediately preceding his illness.

Further treatment was as follows: January 15, 0.3 gm. salvarsan, intravenously; January 22, 0.75 gm. neosalvarsan, intramuscularly; February 6, 0.9 gm. neosalvarsan, intramuscularly. In addition intramuscular injections each of 1/2 grain of salicylate of mercury were given once a week.

During this time the patient's temperature was constantly flat normal except for slight rise in the first twelve hours after each salvarsan injection. The urine was always negative and blood-counts were normal.

A second Wassermann reaction, Feb. 3, 1913, was still strongly positive but not quite so much so as previously.

When the patient was discharged from the hospital, Feb. 8, 1913, the pupils were normal, gait and station ordinary, heart, lungs and abdomen negative. Mentally, he showed a slight tendency to be silly and inconsequential, but according to his wife and friends recovery was quite complete.

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COMPLETE SITUS TRANSVERSUS

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Reports of complete transposition of the viscera are but infrequently encountered in the literature. Because of the relative rarity of the condition, therefore, the following case report may be of interest.

History.—J. G., Italian, male, aged 22, Oak Harbor, Ohio, laborer, was admitted to the medical service at St. Vincent's Hospital, Oct. 6, 1911. The family history revealed nothing of importance. The personal history revealed no serious previous disease. The patient had never been in the tropics. His present illness began about one month prior to admission, with frequent chills and a continuous type of fever ranging daily between 101 and 103 F., during which time he had lost about 23 pounds in weight. His main complaint was referred to pain beneath the edge of the lower ribs on the left side. The patient believed that his illness was the result of an accident, which took place about one month before the illness began, in which he fell against an iron joist, striking the left side below the ribs.

Physical Examination.—The position of the apex-beat was slightly external to and below the right nipple. The area of cardiac dulness extended to the left to the midsternal line, at which point resonance was encountered continuous with resonance over the normal heart area. In the sixth interspace, left parasternal line, dulness was found which extended to the left as far as the midaxillary line and posteriorly to the angle of the scapula. This dulness in front and behind extended to the edge of the ribs and did not, on auscultation, reveal the presence of any air-containing tissue beneath. Vocal fremitus was not present, nor was this area of dulness movable on change of position. The normal liver dulness could not be made out on the right side.

The leukocyte count numbered 19,600. Examination of the urine was negative to pus and all abnormal ingredients.

Diagnosis.—It was at first thought that the patient had a so-called "sacculated" pleurisy with effusion involving the lower left chest with displacement of the heart to the right and a compensatory emphysema of the right lung, which had pushed the liver downward below its normal position. The fact, however, that dyspnea and cough were absent and that breath sounds could not be heard over the area of dulness on the left, and that the dulness was not movable on change of position, seemed to exclude such a possibility. An enormous pericardial effusion was considered, but the distinctly visible apex-beat and a distinct area of resonance between the heart dulness to the right and the dulness encountered to the left and below, rendered such a condition improbable.

Roentgen Examination.—Two days after admission skiagrams were taken by Harry W. Dachtler which clearly showed complete transposition of all the organs. The liver was found to be occupying relatively the same position on the left side as normally on the right, while the stomach was found on the right side. The heart was found in relatively its normal

position as regards its long axis, except that it was on the right side.

Further History.—The leukocytes two days after admission numbered 28,400. The continuous type of temperature with evidence of sepsis and occasional slight chills made it necessary, in view of the skiagraphic findings, to consider the possibility of appendiceal abscess on the left side, a suppurating gall-bladder on the left side, a liver abscess or a subdiaphragmatic abscess likewise on the left side. The patient's greatest pain and tenderness were found to be just below the edge of the ribs, but no mass or tumefaction was present except when in the upright position at which time a slight bulging or prominence was present on the left side in the flank.

The history of previous trauma to this area and other facts finally led to a diagnosis of probable extraperitoneal perirenal abscess. An incision was therefore made in the left flank Oct. 14, 1911, by the late Dr. Peter Donnelly under nitrous oxid-oxygen anesthesia and about 6 ounces of pus evacuated from an abscess about the left kidney. Cultures from the pus showed *Staphylococcus pyogenes albus.*

After about three weeks' drainage, the patient's recovery was practically completed.

FATAL PERITONITIS DUE TO INFECTION WITH BACILLUS COLI*

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The following case of septic peritonitis is of interest as it was proved to have resulted from infection with *Bacillus coli*, and as infection of the peritoneum with the colon bacillus, through the uterus, is somewhat rare. The material from this case was referred to this laboratory by Paul Reed, M.D., Nov. 7, 1912, with the following history:

History.—Woman, aged 35, married, had a child, aged 4 months, and had menstruated atypically since delivery. She was ill for two days with severe pain in pelvis. Examination on third day showed no fever present but a foul-smelling vaginal discharge, and severe pain in pelvis. Next morning the patient had all signs of general peritonitis which rapidly grew worse. She died during the morning of the next day (fifth day after onset).

The patient denied any attempt at abortion either by herself or by any one else. Her husband admitted that the patient had previously attempted to induce abortion in a former pregnancy. At the time of her childbirth, four months previously, the patient complained of severe pain in the right side, and examination was extremely painful, the patient being prostrated following it.

Necropsy.—After the death of the patient, the uterus was removed by vagina together with some fluid from the peritoneum. The uterus was somewhat enlarged, and the wall was thickened and felt soggy. At the top and just slightly posterior was an area about 2 inches in diameter that was denuded of its peritoneum and was rough and necrotic. In the center of this spot was an opening which led into the uterine cavity. A pencil fitted nicely into this canal. When a cut through the tissues was made, along the pencil, an area of extreme necrosis, brown and extremely fragile and crumbly was found along the course of perforation. The mucosa also was inflamed throughout, was necrotic about this area of perforation and contained a slight amount of débris. Sections were made through the uterine wall at the area of perforation and showed that the process was localized in a marked necrosis of this area, severe enough to be called gangrene. The vessels throughout the uterus were congested, and hemorrhagic exudate was present on the peritoneal surface. Gram-negative bacilli were seen in the tissue about the area of necrosis.

Laboratory Findings.—A bacteriologic examination was made of the fluid removed from the peritoneal cavity. Smears showed an immense number of Gram-negative bacilli which varied somewhat in size. On agar-slants in twenty-four hours we obtained a diffuse white streak with discrete, round, white, slightly raised colonies at the periphery. A fecal odor was present. Examination showed them to be Gram-negative bacilli resembling those seen in the smears made from the peritoneal fluid.

Further cultures showed that gelatin was not liquefied, that litmus milk was curdled and made acid, that gas was found with all sugars and in fermentation tube with lactose broth and that indol was found in Dunham's peptone solution. The following litmus sugar serum water media were used: dextrose, levulose, galactose, lactose, saccharose, maltose, mannite and dextrin. All were made acid and produced gas except dextrin.

Conclusions.—From the evidence it would seem that the organism in question fulfilled all the requirements of *Bacillus coli.* According to some authorities dextrin also should have been fermented; according to others, it should not.

Cases of peritonitis caused by the colon bacillus are common, and cases of uterine infection with the same organism are common, but this combination of *B. coli* peritonitis through perforation of uterus is not common. As the patient would acknowledge nothing, no light can be thrown on the instrument used or on how such a large perforation could have been made without more shock. It is not known that the perforation was made artificially, but it seems as if no other explanation is possible, since the attending surgeon did nothing more than tampon the cervix to increase dilatation. Of course the four months since last pregnancy is sufficient time in which to become pregnant, yet one would hardly suppose that the patient could have become far enough advanced in pregnancy to be cognizant of the fact. Nevertheless in some manner the uterus became perforated. So far as it is possible to tell one would believe that the lesion was not of long standing. No attempt has been made to go through the literature on this subject.

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BURN OF EYEBALL DUE TO CAUSTIC CONTENTS OF GOLF-BALL

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William J., aged 10, on Aug. 2, 1912, while dissecting a golf-ball, ruptured the small rubber bag in the center of the ball, and the contents spurted into his right eye. This caused immediate, excruciating pain, lacrimation, photophobia, redness and edema of conjunctiva. The surface of the cornea became opaque. The child was attended by a local physician, who irrigated the conjunctival sac and applied cold compresses. The patient was first seen by me on August 7, five days after the injury. The eye presented the picture of a typical caustic burn of the cornea and conjunctiva. The conjunctiva showed numerous areas of necrosis, some large, some small. The cornea was opaque to the extent of being almost white. The destruction had extended into the substantia propria; the pupillary border of the iris could scarcely be seen, and vision was reduced to shadows. The patient was admitted to the hospital and the usual remedies were applied, with no material alteration of the progress of the case toward cicatrization. The eyeball remained irritable and painful. At one time during the height of the inflammation the tension seemed increased. This was followed by a gradual diminution of tension until the eye became quite soft. It looked as if it were going on to phthisis. After the more aggravated symptoms were relieved, the child was allowed to go home, making subsequent visits to the hospital once a week up to the present. The cornea is becoming slightly more transparent, and the areas of necrosis in the conjunctiva have undergone cicatrization. The palpebral conjunctiva escaped a great deal of the caustic action of the alkali. Vision in the eye is slightly improved, the patient being able to count fingers at one foot.

An analysis of the paste in the center of a golf-ball said to be of similar make to the one causing the accident showed that it consisted of a mixture of barium sulphate, soap and a free alkali (sodium hydroxid, 2.4 per cent.).

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