

apparently a little line of prostatic tissue to be made out at the site of the prostate gland. As yet there has been no change in the voice.

* The unique feature of this case, and the one which introduces perhaps an entirely new principle, is the fact of stimulation of the vestigial testicle into development. It is possible that this resource may be employed upon other patients who have lost testicles from mumps, and perhaps upon patients who have undescended testicles, after the latter have been placed in the scrotum by some operative procedure.

We are confronted with another question. Is it possible that in some cases of ovarian grafting the ova have been furnished, not by the graft, but by latent cell rests in the broad ligaments, which embryonic remains have been stimulated into activity through the influence of an ovarian graft in the vicinity. We know that such cell rests do occur, and Lucas-Championnière suggested this explanation for one of my cases of ovarian grafting in which the patient has borne two children. Opposed to this idea and confirming the theory that in some cases of ovarian grafting the graft may retain its full functioning identity, is the testimony from Harvard University Laboratory in connection with the ovarian crossing of guinea-pigs. Although both white and black colors appeared in the progeny after ovarian crossing in guinea-pigs, there still remains a question belonging to recessive and dominant characters.

For the most part we may assume that heteroplastic grafting of any sort will be followed by disappearance of engrafted tissue unless the physiologists of tomorrow are enabled to prepare individuals for accepting the tissue of other individuals. The very favorable reports of heteroplastic grafting made by Lydston and others leave us still with knowledge that heteroplastic grafting of tissues and of organs has not as yet been placed upon a satisfactory physiologic basis.

Two years ago I reported a case of testicle grafting¹ in a patient who had lost both testicles ten years previously as the result of an accident. For nearly ten years there had been no erection, and the patient had become corpulent and excessively nervous. The immediate effect of testicle grafting in this case was to restore him to a feeling of sexual manhood, which persisted for some months. A letter received from this patient on March 27 of the present year states that "the operation has entirely relieved the nervous symptoms, but the masculine effect was only temporary, as at present there is no indication that anything could be accomplished."

The new point introduced by the case of Mr. H., that of stimulation of latent cell rests into activity by a graft which itself disappears, would seem to open a vista which has not been anticipated.

In my own experimental work, both with ovarian and testicle grafting, patients have been given to understand that the procedures were wholly experimental in their nature. It is on this basis only that I have cared to assume the responsibilities of sex organ grafting.

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1. Morris, Robert T.: New York Med. Jour., Oct. 17, 1914.

Procrastination.—The world has ample knowledge of its perils, natural and created, but it remedies only on the heels of disaster and safeguards only after sacrifice.—D. C. Seitz.

LUMBAR PUNCTURE FOR THE RELIEF OF CONVULSIONS IN PUERPERAL ECLAMPSIA

REPORT OF TWO CASES

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CASE 1.—A mulatto, aged 35, multipara, mother of five children, five and one-half months pregnant, had nineteen convulsions in twenty-one hours before I saw her, May 17, 1915. Her blood pressure, fifty minutes after convulsions, was 255. I bled her, drawing off 36 ounces of blood. The pressure was reduced to 190. She had passed urine just before the first convulsion, but none after. I catheterized her, obtaining 1 ounce of very dark urine, which solidified about one half on boiling. When I saw her a short time afterward, she had had the twenty-third convulsion, was in a state of coma, and showed no improvement.

On account of high blood pressure, I inserted the needle in the third lumbar interspace, and drew off 40 c.c. of slightly bloody fluid; no anesthetic was used. There was no evidence of pain, as the patient was in profound coma. The fluid flowed as if under pressure. On removal of needle, consciousness immediately returned. The patient at once drank freely of water. She had no more convulsions, and remained rational. Two hours later she voided 10 ounces of urine; three days later the urine was free from albumin, and the patient's condition was apparently normal. Magnesium sulphate was used as a purgative following the lumbar puncture.

June 17 following, she had a miscarriage; the child was dead. I did not see the patient at this time, but arrived after the delivery was completed. She had had no convulsions, nor any unusual symptoms of nervousness during the miscarriage; her health has remained good to the present time.

CASE 2.—Sept. 1, 1915, I was called in consultation with Dr. W. L. F. Knolle to see Mrs. B., white, primipara, aged about 21, of German descent. Her family history was good. The patient gave a history of headache and diarrhea. Dr. Knolle had been called on account of the severe and frequent diarrhea at full term. The patient had had convulsions before he arrived, and had seven or eight before 11:30 a. m., the time of delivery with forceps. The child was alive.

The patient had a convulsion fifteen minutes after labor, one every one or two hours until 3 p. m. and then one every three hours until 3 a. m., September 2; between 3 and 4 a. m. she had four convulsions; between 4 and 5:30 she had four convulsions; at 5:30 she had two convulsions in the space of ten minutes; after that she had one every thirty minutes until 7:30 a. m., the time of operation. This made a total of more than twenty convulsions.

The cerebral excitement had been so severe all night that it required three or four attendants to control her. During the previous twenty-four hours she had been given saline purgatives, bromid, chloral hydrate, apomorphin, morphin and veratrum viride with no results. At 7 a. m. she was catheterized and 2 or 3 ounces of urine with considerable albumin were drawn off.

At 7:30 a. m. I made a lumbar puncture in the third lumbar interspace, and drew off 6 drams of clear fluid. The patient at once became quiet, and not another convulsion followed. At 9:30 a. m. she drank some water, at 11 a. m. voided urine in bed, showed evidence of return of consciousness, and took water freely. At 12 m. she was semiconscious. At 2 p. m. she voided 12 ounces of urine voluntarily. At 8 p. m. she was rational. She made an uneventful recovery.

I used lumbar puncture in both cases, because I had seen convulsions controlled in my cases of cerebrospinal meningitis only a few years before, by drawing the fluid from the spinal canal before injecting serum.

COMMENT

The high mortality, 35 per cent., is no argument against the usefulness of the treatment in proper cases. No treatment, undertaken as a last resort to save life, can have a brilliant record. A study of the various articles shows that not all cases have been reported; thus, a writer may say he has treated several cases, but may report only one. If these

unrecorded cases ended in recovery, the mortality would be somewhat lower.

Lumbar puncture is a treatment only for the convulsions of eclampsia, not of the toxemia of pregnancy. However, with the convulsions controlled, we are in a better position to treat the toxemia. Puncture seems to be indicated in those cases in which convulsions are severe and frequent. It does not, however, interfere with other forms of treatment for the disease.

A CASE OF PROGRESSIVE NEURAL MUSCULAR ATROPHY

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The following case is presented in order to add it to the number reported:

History.—C. J. H., a man, aged 24, was admitted to the United States Naval Hospital, Washington, D. C., Jan. 13, 1916. The family history was negative, except that one brother had had a "nervous" attack some years previously, but had been well since. The father, mother and one sister were living and well. No brothers or sisters were dead. There was no history of any nervous or muscular disease other than that noted of brother.

The patient's birth and development were normal. He learned to walk and talk at the usual age. He stated that he had had the ordinary diseases of childhood, from which he made good recoveries. His adolescence was uneventful. He enlisted in the United States Navy, Oct. 13, 1909, and served less than one year. Then while breaking up a box, a piece of tin struck him in the right eye, lacerating the cornea. This resulted in a cataract, which was needled, and he has about $\frac{1}{20}$ vision. There were no complications or sequelae. This injury caused his discharge from the naval service, June 24, 1910. He returned to his home in New York state, and worked on the farm. The patient stated that he had always been strong and had done hard labor. He had always abstained from alcohol and denied all venereal disease.

Present Illness.—This began in the fall of 1911. At that time the patient noticed that both of his shoulders were suddenly affected with a peculiar sensation of weakness, and that he was scarcely able to raise his arms. He remembered having had much difficulty in placing the bedclothes over his shoulders; but he had perfect use of his hands. This condition gradually altered to a decided discomfort, but he felt no acute pain and did not notice any swelling. It was considered that his condition was "rheumatism," and also that he had sprained his shoulders. However, he had no recollection of injuring these or even of using them to excess. This attack lasted for about three months. He gradually regained his strength and felt as strong as ever. During a part of this time he was confined to bed, but was not seriously ill. He did not recall ever having had any fever or chills. During this attack no other muscles than those above the shoulders were involved.

The next attack came on gradually in August, 1913. This time both knees were involved. At first the patient noticed that they were weak and later that they were swollen. The muscles of his legs were sore, and the "cords" underneath the knees were tender. If he bent his knees he would sink to the floor and scarcely had strength enough to hold himself up. He noticed that while in bed and usually about 1 or 2 o'clock in the morning his legs would sweat rather freely. During this attack he was forced to use crutches for about three months. He was not confined to bed, but was able to lounge about the house. This attack lasted approximately six months. He apparently regained his former strength and was able to go on with his work. No other joints than the knees were involved during this attack.

The next attack began in May, 1914. The patient first noticed slight weakness in the legs. In about a month he was unable to walk at all, and in another month he noticed that the arms were becoming involved. At first they were weak

and later on he was unable to use them at all. The wrists and elbow joints were affected and showed considerable swelling. The patient was unable to move his legs back of him, and when sitting down he could not raise his feet off of the floor. The calves of the legs became swollen and the hands showed a good deal of contraction. During the spring and early summer he was confined to bed. He was unable to care for himself and it was necessary for him to be fed. His condition gradually became worse until about the middle of July. After this he showed slight improvement, and gradually became better until he was able to go about on crutches. He states that his hands and wrists became "awfully hot." Between attacks and during them his general health has been good. He believes that he is worse before a storm, and that he is especially susceptible to cold. His only complaint at present is "occasional sharp pains running through his heart."

Examination.—The patient exhibited atrophy of the muscles of the legs, forearms and shoulder girdles, especially the deltoids, of the latter, more on the left than the right. The rest of the body seemed well nourished. The patient used crutches, and with their help was able to get about. He could stand alone, provided he flexed the knees somewhat. There was integrity of the muscles of the thighs, trunk and face. There was marked foot drop on both sides. The involvement of the muscles of the hands was very prominent and the appearance was characteristic, with wasting of the interossei and contractures. The patient was able to perform various coarse movements, such as feeding himself, but it required considerable effort and ingenuity to accomplish this. Ability for finer movements was lost.

Reflexes and Patellars: There was no movement of the legs, but there was some response of quadriceps tendons.

The Achilles tendon was absent on both sides. Plantars were absent, both toe and defense. The cremasteric reflexes were normal. The upper, middle and lower abdominal reflexes were normal. The triceps, biceps, ulnar and radial reflexes were slight, if present at all. Jaw response was absent. Masseteric response was absent. The muscles of the legs, arms and chest responded slightly and slowly to mechanical stimulation. When the muscles of the arms were struck repeatedly there was a persistent tremorlike movement.

Coordination Exercises: The knee-heel exercise was done on both sides, but slowly. The leg movements, anterior, in, up and down were good and equal. The arm movements, forward, backward, anterior, in and rotation were good and equal on both sides. The left foot was more difficult to move than the right.

Sensation: Light touch was apparently normal. Localization of light touch was good. On the right forearm the patient did not always distinguish sharp from blunt. In other segments the response was normal. On the feet he did not distinguish readily between heat and cold. On the hands he did not always distinguish heat from cold but was usually correct. The stereognostic sense was quite good.

The atrophied muscles showed a varying degree of reaction of degeneration, while the arm muscles, apparently not involved, showed a diminution of faradic response. The ophthalmologic examination was negative except for the residual of the injury mentioned.

There was no sphincter involvement. No mental symptoms were apparent. The patient, in spite of his difficulty, was quite cheerful and optimistic.

Laboratory Findings: Urine and blood were normal. Wassermann reaction was negative. The cerebrospinal fluid was clear in appearance. The pressure was 90 mm. of water. The Wassermann and Noguchi reactions were negative. The Nonne reaction was negative. One cell per cubic millimeter. Colloidal gold curve, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0.

The patient remained in the hospital under observation until Feb. 4, 1916. During this time his condition did not change, except that he expressed himself as being more comfortable, which was no doubt due to his living under more favorable conditions than he did outside of the hospital. He returned to his home in New York state and reported by letter, April 1, 1916, that he seemed somewhat better.