

shots both came from the *left*. [This is on the supposition that the mother's testimony at the inquest is the more reliable of her two statements.]

(8) Her ownership of the revolver and her threats to use it on herself.

(9) The razor in her pocket at the moment of her death.

(10) The absence of any scream of terror such as would naturally occur if her husband approached her with a pistol presented to fire.

Then, as to the husband :

(11) His uniform demeanor of kindness to his wife.

(12) His endeavors to dissuade her from her violent purposes.

(13) The absence of any adequate motive impelling him to kill his wife.

(14) His first words after the shooting, — quite as consistent with the theory of suicide as with that of murder.

(15) His words to the neighbor as he left the house.

(16) An adequate and reasonable explanation of his own suicide found in his realization that his known past history would tell against him overwhelmingly.

(17) Finally, as to Edward's mother, the only witness of what transpired in the kitchen, should have some weight attached to her consistent and unwavering belief that the death was by suicide, and that her son was innocent.

On the other hand the theory of homicide has these considerations to support it :

(1) The sex and youth of the deceased. A girl of seventeen, however strong her impulse to kill herself would not probably choose a revolver for the purpose, suicide by pistol shot being a very rare form of death among females.

(2) The open threats of suicide. People who kill themselves rarely give notice of their intention openly and repeatedly ; they *attempt* suicide but do not otherwise betray their purposes.

(3) The number of the shots.

(4) Either of the wounds was of so grave a character as reasonably to prohibit, if not absolutely to prevent, a second shot, especially with the weapon in the hand of a girl.

(5) The direction of the wounds from the left to right ; there should be the strongest evidence that the girl was left-handed if the theory of suicide is to be accepted, and even with such a presumption established, the shots would be awkward.

(6) There was no burning or powder smooching or smutting of the skin around the wounds of entrance, such as shots from the same weapon left about the wound in the husband's face.

(7) The appearances of the wound on the chin indicated a distance of at least twelve inches between the muzzle of the weapon and the skin.

Then, as to the husband, these incidents in his conduct have an obvious relation to the case :

(8) His failure to interfere and overcome his wife before the second shot was fired, the interval being sufficient for such interference if we assume that the weapon was in her hand and not in his.

(9) The pistol was in *his* hand at the moment when the mother turned and before the wife, in her falling, had reached the floor.

(10) His violence to his wife a little while before the shooting, following his complaint in the morning that her nervousness had kept him awake.

(11) His criminal record.

(12) His self-accusing words over his wife's body.

(13) His immediate flight with the weapon in his possession.

(14) His dying message on the newspaper margin.

(15) His own precipitate suicide, obviously determined upon when he bade his mother good-bye.

(16) Finally, the mother's evident and natural bias in favor of her son and her admitted prejudice against his wife are an adequate basis for the presumption that while she honestly disclosed many facts in the case, she distorted others and successfully concealed still others.

Now which of the two theories has the firmer foundation in facts ? Was it a case of suicide or was it a case of murder ?

A CASE OF URÆMIC CONVULSIONS DURING PREGNANCY.¹

BY G. K. SABINE, M.D., BROOKLINE, MASS.

In the care of the following case I am greatly indebted to Dr. H. M. Cutts for much kind assistance and many valuable suggestions.

Mrs. B., age twenty-two, an exceptionally strong and vigorous woman, a native of Nova Scotia, primipara, about six months' pregnant, had noticed considerable swelling of feet and some puffiness about eyes, but had experienced no great inconvenience from it and had kept about her household duties as usual.

On the morning of October 27th I was summoned for the first time, in great haste, but owing to the long distance at which the patient lived from my house, some time elapsed before my arrival, which was at 9.30.

She was found in a comatose condition, and attendants reported that she had had two or three convulsions, the first seizing her two hours previously while sitting on the edge of her bed talking with her husband. A hasty examination revealed the œdema of feet and puffiness about eyes and on palpating abdomen, a pregnant uterus reaching up to or above umbilicus.

Immediately patient was seized with another convulsion, when ether was at once freely administered, which seemed to control the trouble for a time, but patient remained in a state of profound coma. In the course of an hour, or at 10.30, another convulsion appeared, immediately after which one-eighth grain of muriate of pilocarpine was given subcutaneously, but this produced little or no effect. At this time began to give tincture of digitalis (gtts. viii), and acetate of potash (gr. x), every two hours, though patient could be made to swallow only with great difficulty.

For a time after the administration of ether was begun it seemed as though the convulsions were about to cease, but the relief was only temporary as they occurred at intervals, varying from a little over an hour to nearly two hours, until three o'clock in the afternoon, when they became more frequent. Between this time and seven o'clock no less than six occurred. At the slightest indication of the approach of a seizure ether was freely applied, the mouth gagged, etc.

During the day three one-eighth-grain doses of pilocarpine were given, none of which produced more than the slightest diaphoresis or salivation if any at all. Urine drawn in the early evening was found to contain

¹ Read before the Boston Society for Medical Observation, January 6, 1890.

a large amount of albumen, becoming nearly solid on the application of heat, and later microscopic examination revealed many granular and epithelial casts. Pilocarpine having been tried without marked effect, and the patient's temperature being found considerably elevated, a number of small doses of antipyrine were given with like unsatisfactory result beyond lowering the temperature temporarily.

At 9 p. m., patient's condition was becoming rapidly worse, the pulse, however, was only 100; temperature, 105°, and respiration 32. At this time antipyrine (grains x), had the effect of lowering the temperature a degree and a half in the course of an hour and three-quarters. In view of the fact that the patient's condition was growing every moment more desperate it was decided to attempt to provoke labor, first by dilating the vaginal os with the finger, no tent being at hand, but that not being successful an endeavor was made to rupture the membranes, first with an English gum-elastic catheter, and then with a metallic intra-uterine douche, but both attempts were equally unsuccessful. The catheter and douche were both allowed to remain for some time in the canal with a view to induce uterine contractions.

The attempts to induce labor occupied considerable time, during which patient was kept fully under the influence of ether. As soon as this was discontinued a very severe convulsion occurred (the sixteenth?) after which the coma deepened, the breathing became stertorous and irregular, the pulse rapid and very feeble. It was now decided to perform venesection, and accordingly a little after midnight about sixteen ounces of blood were withdrawn, the median basilic vein of right arm being selected for that purpose. Some time before the full amount of blood had been withdrawn the beneficial effects of the procedure were apparent. The breathing became more quiet and regular and the jactation, which previously existed, ceased. The pulse, which was rapid and weak at the start was not appreciably affected. No eclamptic seizures occurred after this, but patient remained in a more or less comatose condition for many hours.

At 10 A. M., on the 28th, temperature was 103°; at 1 p. m., 100.8°; and at 10 p. m., 99°. Very slight labor pains began in the evening, twenty hours after the attempt to induce them. At 10 p. m. the os was the size of a quarter of a dollar. Plenty of milk and an abundance of water had been given during the day, and the digitalis and acetate of potash were administered every four hours. The urine was being secreted in abundance.

At 1 A. M., on the 29th, labor had not progressed, when ten grains chloral hydrate were given with a view to softening the os. At 4 A. M., the bowels were evacuated by means of an enema, when patient spoke for first time for forty hours. At 6 A. M., pulse was 86; temperature, 98.6°; respiration, 24. The os was then a little more dilated, but the pains were very infrequent. The patient could now be made to understand somewhat, but could not converse. At 2.30 p. m., the fetus was suddenly expelled by one or two pains, the placenta almost immediately following. Fetus was about thirteen inches long, seven from head to umbilicus, and six from umbilicus to feet. Epidermis was macerated and detached from large portions of the body.

Consciousness was now regained, but patient apparently remembered nothing. The digitalis and ace-

tate of potash were continued in reduced doses, and a diet of milk given during all this time. The urine was freely secreted and now voluntarily passed.

October 30th. Slept well during previous night. At 10 A. M., pulse, 80; temperature, 98.6°. During the day urine secreted in great quantity, passing it no less than nine times. At one time passed more than two pints. Examination showed only a trace of albumen (the small relative quantity being due probably to the very large amount of urine), with still a few granular and epithelial casts. At night appeared quite bright and intelligent. Very slight lochia.

October 31st. In good condition. Complained of some headache. Pulse, 86; temperature, normal. No lochia. Slight tenderness over uterus. Quantity of urine in twenty-four hours, five pints.

November 1st. Pulse, 76; temperature, normal. Slight return of lochia. Quantity of urine in twenty-four hours, two pints.

From this time on pulse and temperature continued normal. In fact, at no time after the fetus was expelled did the temperature rise above 98.6°. Throughout, an endeavor was made to carry out the strictest antiseptic precautions possible under the circumstances, the vagina being washed out with a solution of corrosive sublimate both before and after the attempts to induce labor, etc.

November 7th. Patient felt perfectly well with exception of slight headache. No oedema for some time. Urine contains a very perceptible amount of albumen but no casts. Tincture of muriate of iron (gtt. x, t.d.), ordered. Digitalis discontinued.

November 22d. Up and about the house attending to household duties. Still some albumen in urine.

Although this case made a good recovery, the treatment, in many respects, is open to much criticism. First, if the advice of most authorities had been followed, phlebotomy would have been resorted to much earlier, in fact it would have been done at the very outset. Opinion as to the advisability of the procedure is not unanimous. Perhaps I may be excused for quoting Lusk, in his "Science and Art of Midwifery," "The indications for treatment during the outbreak are, for the most part, the same as those laid down for uræmic symptoms unattended by convulsions, namely to lower the arterial tension, to diminish to the fullest extent practicable the irritation of the vaso-motor and convulsive centres, and to restore to the kidneys their normal functions. Spiegelberg claims that these three indications are most completely fulfilled by venesection. The special advantage of venesection lies in the rapidity of its action; incidentally it favors absorption and renders the patient more susceptible to other remedies. It forms, therefore, naturally the first step in the treatment of convulsions," etc.

Playfair says: "In properly selected cases venesection is a valuable remedy;" but also says: "The mortality has admittedly been much lessened since its indiscriminate use has been abandoned." Schroeder recommends resorting only very exceptionally to venesection, which is so highly extolled. During the attacks he is convinced that it is not indicated, as it deteriorates the quality of the blood, and the attack can be prevented with so much greater certainty by means of narcotics. In very strong, full-blooded women, where symptoms of pulmonary congestion exist, venesection may become absolutely essential.

Cazeaux says: "At the head of the list of cura-

tive means, we must place sanguineous emissions, which have been resorted to under every form."

I am informed that at a meeting of one of our District Societies, held not long since, where the subject was under discussion, the weight of opinion seemed to be decidedly against it.

As to the attempt to induce labor, it is very possible, and quite probable, that it would have terminated as it did had there been no interference. Certainly no harm was done, as the appearance of the fetus due to the macerated skin showed that it would not have been retained much longer, had the woman recovered without its expulsion at the time. Of course, the attempt to dilate the os was a procedure worse than useless, and probably never ought to be resorted to in primipare at this period of gestation; however, in this instance, we were not quite sure that pregnancy was not farther advanced than was stated by friends. Where uræmic convulsions occur at the time of confinement, or near the end of pregnancy, or are even threatened, probably no one to-day would hesitate long about deciding what course to pursue, namely, to dilate the os and deliver the woman. Certainly no one would allow the convulsions to continue any great length of time without resorting to this measure. To be sure, in a certain proportion of cases, the eclampsia continues for a time after delivery, but in the vast majority of instances, the convulsions either cease altogether or immediately diminish in frequency and severity.

Strangely enough the books, which are supposed to be largely our guide in such matters, are, on this point, at variance; while some strongly advocate interference, others oppose it, and still others are quite non-committal. Certainly the introduction of the use of antiseptics has done away with one great element of danger where intra-uterine operations are undertaken.

If a patient survives an attack of eclampsia, the uterus is almost sure to expel its contents. If the attack is at a time when the os is undilatable by force, probably but little is to be gained by interference. On the other hand, but little harm will be done by the careful introduction of a bougie or catheter, thus ensuring the expulsion of the ovum, for if this does not take place the chances of recovery of the patient are extremely slight.

MEDICAL PRACTITIONERS AND MEDICAL EDUCATION IN JAPAN.

BY A. C. H. RUSSELL,
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DR. S. NAGAYO, Director of the Sanitary Bureau of the Home Department, in an address before the Tokyo Medical Society, stated that European medicine was introduced into Japan 131 years ago by Dr. Rankwa Maeno, a Japanese.

With extraordinary diligence and patience, and in the face of great difficulties, he learned to understand Dutch, and made translations for the first time.

He and a few other illustrious doctors formed a society for studying Dutch. They translated in almost every branch of medicine, and thus encouraged the study of European medicine. This is the first period of the history of medicine in Japan.

About thirty years ago, Dr. J. Matsumoto, Medical Director-General of the Army, established a hospital in

Nagasaki, in connection with which medicine was taught. The instruction was given partly by Japanese physicians and partly by Dutch doctors employed by the government. It was necessarily imperfect, because, though the teachers followed systematically the course of study, the students could not attend regularly, and through want of elementary knowledge could not understand the greater part of the lectures.

After the Revolution of 1868, the distinction of classes was abolished so that all students were treated alike, the rules of the school were altered, students were examined strictly, and were obliged to remain throughout the session, a preparatory course was organized in mathematics, physics, chemistry, zoology and botany, and young students were entered pledged to continue study for a fixed term of years. This is the second period, which ended about twenty years ago.

Just after the Revolution, the Seiyō Igakusho (Foreign Medical School), was established in Tokyo, the military hospital was removed there from Yokohama and united with it. Japanese doctors were its directors; an English doctor and several German doctors subsequently aided as teachers. This was the beginning of the present Medical Department of the University of Tokyo, into which it has gradually grown. Japanese graduates were, after some ten years, substituted for nearly all the foreigners.

The progress of medical science has been aided by examination for license to practice medicine.

Just after the Revolution of 1868-9, it was found by examination that only twenty-one per cent. of the doctors practised the European system of medicine, the rest adhering to Chinese or Japanese methods.

In 1875, the Home Department gave notification in Tokyo, Kyoto and Osaka, that those wishing to practice must pass an examination on certain fixed subjects and obtain a license.

By the rules, directors of local hospitals gave questions on seven subjects, stated their opinion of the answers and sent them to the Sanitary Bureau of the Home Department for final examination before the licenses were granted.

Those who were already practising were allowed to continue without examination.

At the request of the local governors, who, by establishing hospitals and schools tried to secure a general distribution of trained physicians, these examinations were held in other places, and in 1878, they were held in all the provincial districts.

To avoid partiality, the questions were drawn up at the Sanitary Bureau of the Home Department and sent in sealed letters to the local governors, who appointed a committee from the directors of hospitals and graduates to open them and conduct the examinations.

In 1883, license and examination regulations were promulgated making provisions for examinations in the spring and fall of each year.

The Home Department appointed committees from graduates living in the different localities and sent inspectors to direct the examinations.

These regulations are now a part of the national law, and the members of the committees are appointed by the Cabinet.

The foregoing is an imperfect *résumé* of Dr. Nagayo's able and interesting address.

By the government reports of the 1st of January of the present year there are in Japan 40,321 practi-