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PORTER ON THE INDICATIONS TO BE DRAWN FROM THE
URINE AS TO THE SAFETY OF ANÆSTHETICS.*

At a meeting of the Clinical Society of the New York Post Graduate Medical School, Dr. William H. Porter presented a paper upon this subject which contains some original and well-supported views as to the action of anæsthetics, and the indications as to their safety presented by the state of the urinary excretion.

After describing the characteristics of normal urine and the transmutation changes which regularly occur in it when exposed to the air, which are indicative of a normal state of the system, and one in which the nutritive vitality is well maintained, he states that patients presenting such a normal urinary excretion bear etherization and chloroformation without ill effects as a general rule. When, however, the quantity of urine being normal, or below the standard amount, the color is pale and the density low, it indicates that digestion and absorption are imperfectly effected, and that nutrition is below the normal standard, and vital activity deteriorated. Patients in such instances, while they do not necessarily succumb to the damaging effects of anæsthetics, may not bear the etherization or chloroformation well, and often require stimulation before the administration and during the anæsthetic period. Chloroform in these cases is equally as safe as ether.

If the urine is scanty, high-colored and of high density, it is usually associated with a deficiency of urea and an excess of uric acid, and often contains a number of other by-products, all of which are due to the incomplete oxidation of the proteid molecule. The urine may be normal in amount, of normal or higher color, yet the density be abnormally high, but with a diminished amount of urea.

* The Post-Graduate, July, 1893.

few have been the cases that the question has arisen whether or not the two diseases were antagonistic. Calculus is not uncommon in men who have had gonorrhœa, since the stone is often lodged in the urethra behind a stricture, and the contraction of the canal is sometimes an obstacle to litholapaxy.

It may be an interesting question in pathology to investigate the influence of the syphilitic poison on the formation or the accretion of uric acid and its compounds; and this study may lead to far-reaching results on the subject of prophylaxis, which is now receiving so much attention.

PLAGUE IN CANTON.

BY MARY NILES, M.D., *Canton.*

Case I.—Jan. 16th 1894 I was called to the Kwong Hip Ya-mun to see Gen. Wong's daughter-in-law, who was reported to be suffering from "a boil." Upon arrival I found that she had a very painful swelling in the inguinal region, and a temperature of 104.8, pulse 150, and a petechial eruption. A doubtful diagnosis of typhus fever was made. Jan. 17 the temperature was 102.5° and pulse 130, there was now a tendency to stupor, "boil" the same. January 18th 4 p.m. patient was reported to have been unconscious since early morning. She had just spoken, for the first time that day, after having taken several doses of bear's gall, she then became so very restless, that it was impossible to take her temperature. The pulse was very rapid, weak, but fever apparently absent. I noticed that she was attired in her grave clothes. January 19th, as no invitation came to visit her I concluded that she was dead. February 22nd I was called again to the Yamun on account of "the boil not yet being healed." On arriving I found my patient well in every respect excepting that there were several discharging sinuses.

Case II.—March 30th I was called to see a child in the girls' seminary of the Presbyterian Mission who was in a comatose condition. The pulse very rapid, and temperature 106°. The swelling in the inguinal region immediately reminded me of the General's daughter. Purpuric patches of varying extent appeared very rapidly on different parts of the body. In two hours a black vomit set in followed by death. Cases I and II were diagnosed as the same disease and precaution taken for disinfection as if for typhus. March 31st reports were brought to me of a very fatal disease in the city of which a number had died suddenly. As the child had but just returned from the infected quarter it was presumable that she had the same disease as the others. I reasoned that all the cases of typhus surely would not terminate so rapidly, and consequently concluded that it was plague not typhus with which I had been dealing.

Case III.—Came on a passage boat from a village several miles away. Mother said an epidemic was prevailing in their street. The child had been sick two days, and had convulsions, coma and fever when I saw her. She died in half an hour. Though no enlarged glands were found the disease was pronounced plague.

Case IV.—A woman living a few minutes walk from the hospital was seen in her home April 8th. Glands on both sides of the neck enlarged and patient said to have been ill five days with high fever. Pulse was found very rapid and thready. Patient died three days after.

Case V was seen April 15th. I found her assigned to one of the rooms in the hospital. There was no glandular enlargement, temperature was 106.4° , pulse 140. I advised getting a boat for patient, and in the interval she was isolated. April 16th her temperature was 101° and she said she felt very much better. Complained of pain in abdomen and had diarrhoea. April 17th temperature 105° and slight delirium, also purpuric spots. Patient died after an illness of 72 hours. Though she had complained of some pain in the groin no swelling was discovered.

Case VI was seen in the afternoon of April 21st. She said she had fallen down suddenly the evening before and had fever immediately after. The temperature was found to be 105.4° . Expression of countenance good and as if in health, while the mind was clear. There was a slight swelling in inguinal region. An infant was nursing at the breast. Directions were at once given for the removal of the infant. Temperature was 104.4° and gland more painful. April 23rd a.m. temperature 103° . Reported that she had felt much better the evening before, and had been free from fever: but, in the night fever had returned and the gland became excessively painful. No mental symptoms were apparent, though the attendant said she had wandered during the night. Three hours after I left the house, the patient died, death being preceded by purpuric spots which appeared all over the body. Nursing infant has continued well to this day.

A woman came to the hospital in a chair April 30th. She said she had been attacked with fever seven days before. Her temperature was 101° and she seemed much weakened. She had four carbuncles on her back. Her husband came with her and had walked the distance of two miles. He had a carbuncle over one shoulder blade. Neither of them gave history of enlarged glands; but only of severe fever. They said the epidemic had been in their street and two out of ten had recovered.

May 2nd a patient in the second day of the plague came in to the clinic. She had come from Hongkong by the night steamer. Glands in the neck somewhat swollen, temperature 105° . Expression of face the same as I have observed in a number of cases, being one of utter apathy. The

patient seems almost unconscious, but will walk about and do as directed. In some patients the facial expression has been perfectly natural, giving the doctor a feeling of security known to be false. The swelling in the neck enlarged to a frightful extent in a few hours, till the girl was becoming asphyxiated by the pressure. The expression then changed from stupor to wild anxiety. Patient died that night.

Several cases have arrived with the buboe in the axilla. One who came with the cervical glands affected was seen continuously for a number of days—an abscess formed and was lanced and the child was progressing well when last seen. I was told of a case in which the temperature rose to 107°. Antipyrin in 15-gr. doses was repeated five or six times. Phenacetine 10 grs. and quinine was also given, the temperature dropped to 104° for an hour and then speedily rose again. The patient was taken to his country home by steam launch, and I understand recovered.

Application was made to me to receive a very poor patient who was quite exhausted after an abortion. Being assured by a reliable person that it was not a case of plague, I consented to her coming. On examination no buboes were found. Temperature was 104° and pulse rapid and weak. There was a bulla on the calf of the leg. As I could not pronounce it plague she was received. The fever continued a number of days. After she had been twelve days in the hospital and was free from fever, temperature indeed subnormal and strength improved, a buboe was discovered in the inguinal region. This she said had been there three or four days. Inflammatory swellings appeared at this time in other portions of her body, and she was removed from the ward. At last accounts patient was nearly well.

Pregnant women have suffered much from the plague. I was called to one woman who was in the third day of plague and in the pangs of child birth. The child was still born and the mother died immediately after the birth. I attended a woman in abortion with a temperature of 103°. It was said to have been occasioned by weeping over the sudden death of her child with convulsions. Two puerperal cases had a temperature of 106° and over, which if not due to plague itself I thought might be attributed to sepsis from plague poison.

The wife of one of our former medical assistants was attacked with the disease. A boat was procured for her reception. She was two months pregnant. After an illness of ten days she aborted. She is now convalescing.

There have been a number of light cases. One lady came in a chair, but walked into the office. She looked perfectly well. Temperature, pulse and digestion normal. She said she had fever six days before and the following day when taking a bath suddenly discovered a swelling in the inguinal region, of which she had not previously been aware and which caused her no pain. I examined the buboe and saw for myself.

It has been noticeable to the people that the rats in infected houses have died. In the house where the child from the school was visiting when she took the disease thirteen dead rats were swept out one morning. In a house into which I went to see a plague patient eight dead rats had been taken out the day before and I accidentally stepped on a rat which squealed but did not run, and was soon dead. One of the officials from his private funds I am told, offered 10 cash for every dead rat brought to him. He had collected 35,252 in one month. 2,000 were brought in one day.

April 11th the officials issued a proclamation that the streets in the city should be cleaned and all rubbish thrown into the river and not sold.

Twenty coolies in government employ were to assist in this work. The attention of the people was also called to a former proclamation ordering the night soil to be taken away before ten o'clock in the morning and only in covered buckets and boats. The officials also went to the temple of the tutelary god, to pray for the people. They subscribed to the idol processions which were numerous. In one procession in the beginning of the epidemic, three children of one family from an infected locality, who were part of the pageant, were taken with the disease during their long march. One was taken down dead in the middle of the day, the second died in the evening, and the third the next day. At first the disease seemed confined to distinct localities but such methods had no power to keep it there and soon it was found in all parts of the city and suburbs. The disease is also in many districts in the province. Its origin is unknown but doubtless in some places it has had its source from Canton. Patients went home to the country in passage boats, some died in the boats and others in their native towns.

It is impossible to ascertain the loss of life from the disease. I sent to the Oi Yuk Tong (愛育堂) at the end of the third month to inquire how many coffins had been distributed by that society in the Chinese third month. They replied over 300, whereas their usual number in one month was from 20 to 30. Others told me that Oi Yuk Tong had posted upon their doors that they had distributed two thousand coffins; while a friend of one of the managers told a friend of mine that he was told in confidence that they had distributed 20,000. Fong Pin-sho 所便方 answered by note to my inquiry that there was a mortality of 296 of the epidemic on their grounds in the third month, whereas last year 108 died of the spring epidemic. One said 170 coffins had passed through one of the city gates in one day. Another reports over 1,000 coffins carried out of one of the city gates in forty days. Later we may be able to form some true estimate of the mortality.