bile in cholera and other diseases, I examined the contents of the gall-bladder in deaths during every stage of cholera, and in a number of miscellaneous cases of various affections which fell under my notice, while pathological assistant in the Royal Infirmary of Edinburgh,—viz.: phthisis, various lesions of the heart and brain, delirium tremens, etc. In the former case, the condition of the liver, gall-bladder, and bile, was such as I have already described,—i.e., essentially healthy; in the latter, the liver was frequently itself affected, chiefly with chronic lesions; the gall-bladder was much more empty and flaccid, paler in colour, being less of a deep green, and the bile was frequently more fluid, its colour more of a brown, sometimes of a deep brownish-red, and gave abnormal reactions with nitric acid. To cite a few instances of the condition of the bile in other diseases than cholera:—

CASE I. *Peritonitis*, general, chronic, tubercular. Dr. Keiller's ward, (male). Gall-bladder very small and flaccid; contained about 3i of bile, which was very turbid, and of a bright reddish-orange tint; when diluted with water, exhibited the ordinary reaction, with nitric acid, modified in degree.

CASE II. *Phthisis*, advanced; fatal, four hours after admission. Dr. Keiller's ward, (male). Liver normal; gall-bladder half empty, flaccid, pale; bile of a reddish-brown tinge; when diluted, showed ordinary reaction with acid.

CASE III. *Delirium Tremens*. Dr. Andrew's ward, (male). Gall-bladder small, flaccid. Bile of a brownish-red colour, with a mere tinge of greenish-yellow; in consistence thick and treacly; gave the usual reaction with acid.

CASE IV. *Cardiac disease*; lesion of aortic and mitral valves; dilatation of right side of heart; general anasarca; ascites. Dr. Keiller's ward, (male). Liver enlarged, but healthy; gall-bladder contained about 3ii of bile, which had a considerable admixture of stringy mucus, and a deep reddish-orange tint; with acid, it exhibited a beautiful play of very rich colours.

CASE V. *Cardiac and pulmonary disease*; hypertrophy and dilatation of the heart; lesion of the mitral valve; ossification of the aorta; pleuro-pneumonia; "nutmeg" liver; gall-bladder greatly dilated, as if the arch of the ascending colon were adherent to the under surface of the liver; its capacity was increased to five or six times the normal state; from the complete loss of shape and change of colour, it was quite unrecognizable as the gall-bladder, the bile resembled in appearance pea-soup, or the stools of dothinerteritis, or the fever stage of cholera; it had a very disagreeable odour, similar to that of putrid cabbage; with heat and acid, it gave a very faint greenish-yellow tint.

CASE VI. *Cardiac disease*; lesion of mitral valve; dilatation, with hypertrophy of the heart. Dr. Bennett's ward, (male). Liver normal in structure and appearance; gall-bladder three-fourths full; was of its usual pyriform shape, pale, somewhat thickened in its walls. Bile had a reddish-brown tinge, and gave the usual reaction with heat and acid in a modified degree.

The objection urged by some that this pink reaction of the cholera stools with nitric acid resembles very closely that produced, under similar circumstances, by the urine-pigment, is not even a strong presumptive evidence against such reaction being biliary; since, though we have not yet exactly arrived at this point in animal chemistry, there are strong reasons, from the results of recent researches on the bile and urine pigments, for believing that these colouring matters will be found greatly to resemble each other, if they are not identical in physical characters, or perhaps derivable from a common source.

In conclusion, I would beg to recapitulate my opinion that bile, and comparatively healthy bile, though, in many cases, perhaps, chemically modified to a slight extent, exists in *all* the cholera stools, or in other words, in the alvine discharges passed during every stage of the disease; because

I. I found a pink, red, brown or greenish colour produced

by the action of heat and nitric acid in *all* cases; these several reactions I consider *biliary*, on the grounds that,—

a. They appear to be indiscriminately substituted one for the other, according as the bile or fluid in which it is diffused is chemically or otherwise modified.

b. To a certain extent, they are convertible into each other,—that is to say, the pinks, reds, and browns are transmutable into a green tint as an ultimate and permanent result, and this is well known and recognised as the normal reaction of bile with nitric acid.

II. I found the same variety of reaction in the vomit of cholera, where there could be no doubt of the presence of biliary colouring matter, and in considerable quantity.

III. I found similar reactions in healthy human faeces, and in the evacuations of typhus, chronic diarrhoea, and dysentery, and other diseases, when there was equally little doubt of the existence of a large quantity of bile.

IV. Analogy would not lead us *a priori* to expect in cholera a large amount of bile to be present in the intestines, or their contents, chiefly for the following reasons:—

a. Its extreme dilution.
b. The absence of the natural stimulus to its expulsion,—i.e., the food.

c. The small quantity expelled in health during fasting.
d. The small quantity naturally present in healthy faeces.

v. The pathology of the liver and bile in cholera, leads us to the belief that,—

a. The secretory structure of the liver is comparatively healthy.

b. The biliary reservoir and ducts are also healthy and quite pervious.

c. The bile, as compared with its condition in other diseases, is both healthy in quality and large in quantity.

Crichton Royal Institution, Dumfries, Feb. 1, 1854.

[To be continued.]

COEXISTENCE OF TUBERCULOSIS WITH CYANOSIS; PRODUCTION OF HEMIPLEGIA BY DETACHMENT OF FIBRINOUS DEPOSIT FROM THE HEART.

By H. FEARNSIDE, M.B. Lond., Physician to the Preston Dispensary.

THE case, of which an outline is given below, supplies an important correction, and also confirmation, of opinions which have been recently promulgated.

It is now generally taught by pathologists, that a venous condition of the blood is eminently antagonistic to tubercular development and deposit. The doctrine is thus broadly laid down by Rokitsansky:—* "All cyanoses, or rather all forms of disease of the heart, vessels, or lungs, inducing cyanosis of various kinds and degrees, are incompatible with tuberculosis, against which cyanosis offers a complete protection; and herein we find a key for the solution of the immunity against tuberculosis afforded by many conditions which at first sight appear to differ so widely from one another."

A similar statement is made by Mr. Simon in his excellent *Lectures on General Pathology*:† "There is one signal peculiarity which attends this chronic venous condition of the blood, which I must not leave unmentioned. Not only in extreme cases of cyanosis, but in all chronic diseases where, from any cause whatever, there is defective arterialization of the blood, the patient enjoys one privilege. He is exempt (perhaps absolutely, but at least all but absolutely, exempt) from tubercular diseases."

In the subject of the following report, cyanosis of the most perfect description was associated with equally well-marked tuberculosis.

* *Pathological Anatomy*, vol. iv, p. 251. (Sydenham Society's Translation.)

† *Lancet*, 1850-1, p. 712.

In the last volume of the *Medico-Chirurgical Transactions*, there is an admirable paper by Dr. Kirkes, upon the detachment of fibrinous deposits from the interior of the heart. Amongst other results referrible to this cause is cerebral softening, occasioned by occlusion of one or more cerebral arteries by fibrinous fragments thus separated, and carried by the blood into the vessels where, from their size, they are arrested. In the case upon which these remarks are founded, hemiplegia occurred a few days before death; and the *post mortem* examination revealed the existence of an obstructed state of the middle cerebral artery, upon the opposite side to that on which the paralysis took place, and a softened condition of the corresponding corpus striatum and optic thalamus; whilst an accumulation of granular fibrin in the left ventricle afforded an obvious explanation of the source of the impediment.

CASE. SUMMARY:—LONG EXISTING SIGNS OF IMPERFECT ARTERIALISATION OF THE BLOOD; NORMAL GROWTH AND DEVELOPMENT; HABITUAL COUGH AND DYSPNŒA; INCREASE OF THESE SYMPTOMS; DROPSY; HEMIPLEGIA, WITHOUT PREMONITORY CEREBRAL SYMPTOMS; SIGNS OF EXTENSIVE PULMONARY EXCAVATION; DEATH. POST MORTEM EXAMINATION; ENLARGEMENT OF THE HEART; CONTRACTION OF THE PULMONARY ORIFICE, AND PATENT CONDITION OF THE FORAMEN OVALE; TUBERCULAR DEPOSIT AND EXCAVATIONS IN THE LUNGS; OBSTRUCTION OF THE RIGHT MIDDLE CEREBRAL ARTERY, AND SOFTENING OF THE RIGHT CORPUS STRIATUM AND OPTIC THALAMUS.

T. W., a stout young man, aged 19, was first seen by me in the autumn of the year 1852. He was the son of robust parents, and his brothers and sisters were strong and healthy. Shortly after birth, his complexion was noticed as somewhat livid and blue, but the circumstance appears to have attracted no special attention for some years, until the occurrence of an accident, to which his friends ascribed his subsequent bad health. On the occasion referred to, being then seven or eight years of age, he fell into some water, and was in imminent danger of drowning. Some time afterwards, he spent the whole of a cold winter's night in the open air, having been inadvertently shut up in the yard of an unoccupied house. An illness of some duration, but the precise nature of which cannot now be ascertained, was the result. The darkness of his complexion became more conspicuous, and he began to suffer from cough, and difficulty of breathing, on any rapid movement; but his general growth and development were not arrested or impaired; he became an apprentice in a foundry; and, at the time when he fell under my notice, his size and stature were not inferior to those of other young men of similar age. A few months before the period mentioned, his breathing became still more embarrassed, and his feet and legs were observed to be swollen at night; and, for the preceding two months, he had been unable to follow his employment. When he consulted me, his face appeared swollen, and was darkly livid; his hands were blue and cold; and the lower limbs œdematous. His respiration was short and quick, and he had a frequent cough, with considerable expectoration. The heart's action was unnaturally strong and frequent; the cardiac dulness on percussion extended from above the fourth rib to the lower margin of the chest, and from an inch to the left of a line descending from the mammilla to the right border of the sternum. Both sounds were normal over the apex, and occasionally both were heard distinct and clear over the base of the organ; more frequently, however, the first sound was rough and murmurish, and over the second and third left costal cartilages a fine but loud grating murmur was heard. The superficial veins were dilated and prominent. There was some want of resonance on percussion under the clavicles, where the breath sound was harsh, and mixed with coarse crepitation, especially on the right side. Elsewhere, the breath sound was obscured by sonorous and liquid rhonchi, but there was no evidence of pulmonary condensation. The secreting organs were sluggish in their action; the bowels torpid; the urine high coloured and scanty.

Such were the phenomena which the case presented on the first and only opportunity which I had of examining it last year. When I next saw the patient (about two months ago), he was moribund. I found that in the interval he had been gradually declining in health, his cough having become more constant, his breathing more difficult, and the dropsy more considerable. Four days previously, he had been down stairs, and, whilst there, had suddenly, and without any premonitory symptoms, been attacked with paralysis of the left side of the body. I found him in bed, breathing heavily, and panting; his face was swollen, and of a dark purple hue; he was rather deaf, but his intelligence was not impaired; his replies to questions were correct. There was extreme restlessness; he was continually desirous of being moved. Considerable anasarca of the lower part of the body was present. The paralysis affected both motion and sensation, and was complete. The heart was beating tumultuously and irregularly, and the pulse was small, rapid, and indistinct. There was marked dulness on percussion under both clavicles; and, on the right side, loud cavernous respiration and gurgling were audible. Over the rest of the lungs, loud mucous and sonorous rhonchi were heard, and so loudly as greatly to obscure the heart's sounds. He died on the following day, and his body was examined about twenty-four hours after death.

The lividity of the face, extremities, and posterior parts of the body, was very great.

Head. Some adhesions existed between the dura mater and skull, along the course of the longitudinal sinus. The consistence of the brain externally was natural, and its vascularity was not unusual. The right corpus striatum and optic thalamus were very much softened, so that their ventricular portions had fallen away in a state of diffuence, leaving an irregular dirty brownish grey surface. The surrounding parts of the cerebral mass were also softer than natural. The left hemisphere was normal. The right middle cerebral artery, for the space of an inch or more from its origin, was blocked up by a coagulum, partially of light coloured fibrinous matter, and partially of blood. The plug was easily detached from the walls of the vessel, which appeared healthy.

Chest. There were very strong adhesions between the upper parts of both lungs and the walls of the chest. A cavity, capable of containing an ordinary sized orange, was found in the apex of the right lung, and connected with it were a number of smaller cavities. The walls of the principal one were formed chiefly by thickened pleura, and a number of obliterated vessels projected from its irregular internal surface. A large quantity of tubercular matter, both grey and yellow, but chiefly the latter, was dispersed throughout the upper lobe, and collected in masses around the excavations. Some tubercular deposit was also found in the lower lobe of the lung. The upper lobe of the left lung was similarly affected, but to a less extent; several cavities existed there, but they were small ones, and the surrounding tubercular matter was less abundant.

Heart. There were three or four ounces of clear straw-coloured serum in the pericardial sac. The heart was much enlarged, being at least twice its usual size: it had a globular and rounded form. Its cavities were dilated, and its walls somewhat thickened. The right auricle and ventricle were very capacious; the foramen ovale was widely open, admitting the little finger without difficulty; the opening of the pulmonary artery was much contracted, barely admitting two fingers; and the valves were thickened. The margins of the cusps of the mitral valve were slightly thickened, but not otherwise abnormal. The aortic valves were healthy, but the aorta was considerably dilated; its coats, however, appeared natural. Both sides of the heart were full of black blood and coagula, and the interstices between the columnæ carneæ of the left ventricle were occupied by a pale fibrinous deposit, of a coarsely granular character, and rather firmly adherent to the surrounding parts, its connexion with which was stronger than the cohesion of the particles; so that, on attempting to

separate it from the walls of the heart, it broke up in dry friable granules.

Abdomen. The liver was much enlarged; its tissue was permeated by a new deposit of light coloured substance. The kidneys also were larger than natural; their cortical part was coarse, and paler than natural.

Preston, March 1854.

CASE OF POISONING BY SAVIN.

By GEORGE MAY, Jun.

SARAH Marcham, aged 18, usually enjoyed good health, but the catamenia had not appeared for some time. On the evening of Jan. 6th, 1854, she complained of slight pain in the abdomen, for which her mistress gave her some ginger in hot beer. About half-past three the next morning, she awoke her sister, with whom she slept, and complained of a pain in the stomach.

At 7 A.M., she refused to rise and dress, but said she was very well. During the morning, there was a slight sanguineous vaginal discharge; the bed clothes were saturated with fluid, and she seemed to suffer considerable pain in the abdomen. She permitted her sister to dress her, but got into bed again directly. She cried when her mistress threatened to send her home, but did not speak after 7 A.M.

I saw her at 2 P.M., she was in bed, and did not appear to notice my presence, nor could I induce her to speak or to attend to my inquiries. The respiration was natural; the pupils of the eyes slightly dilated, but contracted readily on a candle being placed near them. The pulse was feeble, but not sufficiently so to attract particular notice.

Her mistress suggested that the pain might be caused by an approaching miscarriage, and that the fear of detection had induced her to remain in bed, and this supposition might also account for the saturation of the bed clothes. She resisted my attempt to examine the mammae by covering them with her arms.

I then placed my hand on the abdomen; but she seemed to suspect my purpose, and contracted the abdominal muscles. This strengthened my suspicions of pregnancy, and induced me to examine the uterus *per vaginam*. The finger was passed readily, but she thrust down her legs, and I could not reach the os uteri. On my persisting in the attempt, she began to cry. I was now satisfied that she was conscious; and believing that her silence was intentional, and presuming pregnancy, and that a miscarriage might be expected, I advised her mistress to send her to her home in the country in company with her sister.

After my visit, at about 3 P.M. on the 7th, vomiting commenced and continued during the night. The vomited matter was of a yellowish green colour, and, when examined with the microscope, showed the presence of a vegetable tissue, with rectilinear fibres and turpentine cells, it appeared to be identical with some powdered savin, which was compared with it. There was no evidence to show how she obtained the poison. She died quietly at 3 A.M. January 8th, not having spoken for twenty hours.

The body was examined fifty-six hours after death. It was well developed and there were no marks of violence. The lungs were slightly congested in the dependent parts, but otherwise healthy, the right cavities of the heart were full of black blood. The cardiac extremity of the oesophagus was tinged of a yellowish brown colour. The splenic end of the stomach was perforated by two or three large apertures with softened edges, evidently from *post mortem* changes. The mucous membrane was reddened in patches, and a quantity of a dark coloured substance adhered to its surface. The intestines were healthy, and there was no congestion of the rectum. The kidneys were slightly congested; and the bladder was distended with urine. The uterus and ovaries were slightly congested and of normal size; she was not pregnant. The liver was healthy, and the gall bladder not distended. The stomach contained a large quantity of dark green pulsatious matter, with a

peculiar sour smell, with similar fluid extruded in the abdominal cavity. A portion of this fluid was distilled, and, on the addition of ether, a yellow oil, resembling oil of savin, was obtained.

She probably took the poison on the evening of Jan. 6th, for she complained of pain in the abdomen during the evening and again during the night. If this be correct, vomiting did not commence till about sixteen hours after taking the poison, and not till some time after the occurrence of excessive diuresis.

Was her silence intentional? I was led to this conclusion because she attempted to prevent my examination of the breasts and uterus, and began to cry on my persisting. She did not seem to make any attempt to speak.

Was the perforation of the stomach caused by the savin? In the cases of poisoning by savin mentioned by Dr. A. Taylor, there is one in which the stomach was perforated. Dr. Letheby has recorded an interesting case in which savin acted as a narcotic poison.

In my patient there was no stertorous breathing or foaming at the mouth, the limbs were not convulsed, nor the pupils contracted. This case rather resembled some of those rare cases of poisoning by arsenic in which death arises from collapse. Dr. Letheby suggests, that savin affects the uterus by causing congestion of the lower bowel. The intestines in this case were perfectly healthy.

Reading, Feb. 24th, 1854.

CASE OF POISONING BY CENANTHE CROCATA.

By D. NICOL, M.D.

M. E., aged 24, a healthy young woman, residing on the hill above Swansea, returned home about 10 P.M., and, having taken tea, just before returning to bed, drank a strong decoction she had prepared in the course of the day, under the name of "herb-tea", for the relief of erythema, locally denominated *blast*. She had scarcely got into bed, when she was seized with faintness, purging, and vomiting. While on the chamber utensil, she fell into severe convulsions, which continued, with little intermission, until she died—one hour from the ingestion of the decoction.

She was not seen during her illness by any medical man; and the account given above is that of her mother, who was present.

On the following day, I was shown the vomited fluid, of a pale dirty yellowish green colour, with a few morsels of bread floating in it; a basin with the remaining decoction, and the herbs from which it had been prepared; also the roots of two plants, corresponding to those in the decoction, which were identified as those of *cenanthe crocata* (hemlock water dropwort), and the wild celery (*opium graveolens*).

Swansea, March 1st, 1854.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

SATURDAY, FEB. 11TH, 1854.

W. TYLER SMITH, M.D., Vice-President, in the Chair.

LACERATION OF THE PERINEUM. BY I. B. BROWN, ESQ.

Mr. BROWN had operated on the patient two or three years since with success. The patient had suffered for years. The injury involved half the sphincter and half the vaginal septum. This lady had become pregnant, and was lately delivered safely of a large child. The labour was somewhat protracted, and it was thought at one time that it might be necessary to divide the perineum laterally. This, however, was not resorted to; and there was only a laceration of the new perineum to the extent of an inch. The child's head was fourteen inches and a half in circumference; the shoulders seventeen inches and a