

no pain unless the bowels were more than usually constipated, when there was a complaint of soreness in the back. The only facts in the family history bearing on the case were that a brother and a sister of the patient were deaf-mutes and her father's sister had died of cancer. The patient was of a bright yellow colour all over, was extremely thin, and obviously very weak. There was no difficulty in diagnosing a large ovarian cyst pushing a small healthy uterus forwards and extending above the costal margins. The respiratory, circulatory, renal, and alimentary systems showed no evidence of disease except that there was much constipation, with absence of bile from the stools and its presence in the tissues and in the urine. There was occasional vomiting, but this was not an urgent symptom, and did not occur at all between the date of my first seeing the patient and the date of operation. During that time the temperature was taken night and morning. It varied from 99° to 100·4° F. in the axilla. The pulse was fairly steady, about ninety to the minute. Menstruation had ceased at the age of forty-one, and had never given any trouble. The presence of the ovarian tumour made any examination by palpation in the region of the gall-bladder quite impossible. The uncertainty of the nature of the obstruction which existed in the gall-ducts seemed, therefore, an additional argument in favour of removing the cyst, although the condition of the patient was by no means such as to promise success, especially if a tedious operation should be necessary. The absence of any history of pain was against the view that the obstruction was due to gall-stones, but with the possibility that this explanation might be correct there was no alternative to treatment by operation. On March 1st I removed, without any difficulty, a simple cystoma of the left ovary, weighing 5½ oz. and containing fourteen pints of fluid. In spite of the frequent administration of purgatives and enemata for a week before the operation the colon contained a large amount of hard fæces. The gall-bladder was greatly distended, and in the position of the head of the pancreas—or, I thought, a little lower down—there was a somewhat oval retro-peritoneal tumour about three and a half inches in diameter and much flattened from before backwards. It was impossible to remove this, and I therefore closed the abdominal incision in the usual way. Six hours after the operation the temperature had risen to 103° F., the highest point recorded. It gradually came down, and after about a week it was very much the same as before the operation. The record was a little higher, but the temperatures were taken in the vagina, and previously they had been taken in the axilla. The pulse did not go above 96 to the minute at any time. There was no sign of difficulty in the action of the kidneys, and the bowels gave little trouble. I began to clear the colon by enema the day after the operation. The bowels were thus moved twice that day, and afterwards daily, or oftener. A little milk and water was given on the third day, the quantity being gradually increased. Beef-tea was added to the diet later, nutritive enemata being given whenever the rectum was sufficiently empty, until the patient was able to take food freely by the mouth in the course of the second week. She vomited on the afternoon of the sixth day, and again several times on the twelfth day. These were the only vomitings, and convalescence from the operation was otherwise as satisfactory as possible in a patient so feeble. She was bright and happy, would talk incessantly to anyone who could use the dumb alphabet, and expressed herself as much more comfortable without the tumour. Hard fæces in the colon were felt through the abdominal wall for nearly three weeks after the operation. As they were gradually removed the distended gall-bladder became very prominent, but I could not define the neoplasm behind. Of course I did not make any serious attempt to do so, as manipulation could do no good and might do harm. In the third week the patient was encouraged to get out of bed on to a sofa, but she was stronger the first day she was up than on any other, and it quickly became obvious that it was not safe to permit this exertion. She remained cheerful and comfortable as long as she lay still, and there was no further trouble except the rapidly increasing weakness. On the thirty-fourth day after the operation the patient died, while quite quiet in bed, somewhat suddenly.

The following post-mortem report is by Dr. Allchin:—"The body was much emaciated and of a uniform bright yellow (icteric) colour. There was scarcely any subcutaneous fat. The scar of the incision, about two inches long, below umbilicus in the middle line, was quite healed. There was

complete absence of fat from the mesentery and omentum; the latter was adherent to the abdominal wall along the line of the operation incision. No recent peritonitis was observed. There were about three ounces of bile-stained serum in the peritoneal cavity. Examination showed the head of the pancreas to be the seat of malignant growth, which had involved the entire descending (middle) portion of the duodenum, scarcely a point remaining, the new growth forming a villous fungating tube replacing this part of the duodenum and maintaining the continuity of the canal between the first and third portions. The common bile-duct was involved in the growth, and was occluded, causing an enormous distension of the gall-bladder (to the capacity of about a third of a pint), which was full of very dark viscid bile, and the walls of which were much thickened. No gall-stones were found. The entire mass of new growth was about four inches across and an inch and a half thick and at one spot was extremely thin, and would certainly very shortly have burst into the peritoneal cavity, between which and the gut communication would have been established. The body and tail of the pancreas were hard, but there was no naked-eye appearance of new growth. No secondary growth was detected in other organs, and these were for the most part healthy. The uterus and the right ovary and tube (two ounces and a half) were quite normal. The stump of the left tube with ligatures appeared to be healing healthily. There was no peritonitis about it, and it lay free in the pelvis without adhesions."

That this patient was not adversely affected, but was rendered more comfortable and underwent a fairly normal convalescence after the removal of an ovarian tumour within five weeks of her death from cancer of the pancreas and duodenum, seems sufficiently remarkable to be put on record. The administration of purgative enemata twice on the day following the operation and very frequently afterwards was also unusual. The treatment is not to be recommended in many cases; but it seemed to me safer, in this particular instance, than to leave the colon packed full of fæces for several days. Such a condition could hardly have failed to cause abdominal distension, which would have seriously affected a patient so weak. The association of extensive disease of the duodenum with complete absence of vomiting due to chloroform, and with the almost complete absence of this symptom and of any sign of difficulty in digestion during the whole time the patient was under observation, is also worthy of note.

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## COLOURED MILK.

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IN the late summer of 1891 a woman thirty-nine years of age presented herself in the out-patient department of the Infirmary, Cardiff. She stated that during the hay harvest in June, when she was five months pregnant, she noticed some irritation and itching of the breasts. On examining them and squeezing the nipples a greenish fluid exuded. When seen on July 25th I was able to squeeze out from the breast about a drachm of this fluid, which to the naked eye was in all respects except colour like normal milk. A specimen examined under the microscope revealed only the general characters of milk. My first impression was that the colour was probably due to the presence of bile pigment, but on submitting the secretion to the usual tests for bile I was unable to obtain any evidence in support. There was nothing in the condition or the appearance of the patient, moreover, to suggest this; no jaundice and no change in colour of urine or fæces. I sent to my friend, Professor Halliburton, F.R.S., some of the milk which had been allowed to evaporate to dryness, and he agreed with me that the green colour was not due to the presence of bile pigments. He further submitted the specimen to careful chemical examination. His report was as follows:—

"1. The lumps are insoluble in water, alcohol, chloroform, and ether. 2. With nitric acid the pieces are changed to yellow, deepened to orange by ammonia. This, I take it, is the xanthoproteic reaction due to admixture with casein and other albuminous matter. There is no play of colours like that obtained from bile pigment. 3. Hæmin test negative.

Hence it is not an iron-containing derivative of blood pigment. 4. Iodine and sulphuric acid give no distinct blue or violet colour. This excludes lipochromes (fatty pigments); the solubilities of the substance are, however, against this supposition. 5. Boiled with hydrochloric acid and a drop of nitric acid, then shaken with chloroform, no pigment is dissolved out by the chloroform, and therefore we may conclude indigo is absent."

The results of the chemical examination were only negative. Professor Halliburton expressed the opinion that the colour was probably due to an aromatic body produced by bacteria. This no doubt is the correct explanation if one may judge by analogous changes produced in milk outside the body under the influence of bacteria. Unfortunately, the bacteriological examination of the milk was not made. The patient disappeared from observation, and the little secretion that I had rapidly became putrid. When I saw the patient about two months later the green colour had entirely disappeared. The case was a most interesting and curious one, and I believe it is unique. The literature of coloured milk, as far as I can ascertain, affords no similar instance of such a change in milk before it has left the mammary glands. Bile pigments were described in a case of jaundice by Franck, but subsequent observers have failed to find them.

Blue milk<sup>1</sup> owes its colour, according to Fürstenberg, to triphenyl rosaniline. The colour is due to the development of bacillus cyanogeneum, and it is found in the serum of the milk. Blue milk is said to cause diarrhoea. Red milk is due to the presence of micrococcus prodigiosus, which grows with great rapidity in milk allowed to stand. The micrococcus itself is colourless. The colouring matter is probably fuchsin. Yellow milk is produced by the growth of bacillus syxanthus. In cattle plague<sup>2</sup> the milk may be red owing to the presence of blood.

According to Hueppe some of the pigments produced by the chromogenic bacteria belong to the aniline and others to the phenol colouring matters.

Cardiff.

## Clinical Notes:

### MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

#### COEXISTENCE OF INFECTIVE DISEASE IN THE SAME INDIVIDUAL.

BY G. WRIGHT HUTCHISON, M.D. ABERD., M.R.C.P. ED.,  
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THE following case may prove interesting.

On April 30th, in the midst of an epidemic of measles, I was asked to see a boy five years of age, the youngest of a large family. At my first visit I was told that four of the children had passed through an attack of measles, and were then convalescing. They were kept warm in bed and fed on slops, and, the rash having developed kindly and the cases apparently doing well, medical aid was not sought. My little patient had been vomiting, shivering, sneezing, and running at the nose, and he was complaining of headache, general malaise, and aching of the limbs. His forenoon temperature was 101° F. I gave it as my opinion that the child was probably developing measles. The above symptoms went on for eight days, when very offensive diarrhoeal motions, with tympanitic distension of the abdomen, and in a day or two a rose-coloured rash, appeared. Enteric fever was now diagnosed. Things went on as they generally do in a moderately severe case of enteric fever in a child, when, towards the end of the third week of illness, the evening temperature being under 100°, one morning a copious measles rash came out on the upper part of the body. The measles ran its usual course, the rash coming out in three crops. Convalescence began at the end of a week. The little patient could not be kept in bed. He had to be dressed. In another week the temperature again went up, and diarrhoea again came on. He had a relapse

(typhoid). In ten days this subsided. He once more convalesced, this time rapidly and decidedly, and he has kept well ever since.

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#### A NOTE ON THE REFLEX EFFECTS OF GASTRIC DISTURBANCE.

BY J. SNOWMAN, M.R.C.S. ENG., L.R.C.P. LOND.

IT is now generally recognised that the stomach, and particularly the gastric mucous membrane, should be looked to for the explanation of many transient cardiac derangements, such as palpitations and pain. These conditions are occasioned by abnormal impulses transmitted along the nerves—cerebro-spinal or sympathetic—which are distributed to the heart. These impulses are started in the stomach by certain morbid changes occurring therein acting as stimuli to the nerve terminals of the vagus. Now, these impulses arriving at the medulla, may influence the centres in its substance or may become reflected to various viscera, notably the heart. An indigestible meal produces a sudden attack of syncope by reflex stimulation of the vagus *via* the cardio-inhibitory centre; chronic dyspepsia produces palpitation either by inhibition of the vagus centre or reflex stimulation of the sympathetic. With increasing knowledge it will be fully realised how the events of gastric digestion or indigestion are fraught with weal or woe for the body generally. There are several well-recognised reflex results of gastric disturbance, others still remain obscure. The cardiac results may be regarded as the best known; there are the vaso-motor phenomena which produce urticaria, and the cerebral conditions which cause headache and vertigo. It is to the reflex effect on the pulmonary system that the following case points.

A woman forty-six years of age, of neurotic temperament, with good family history, complained of slight colic on the evening of July 22nd last. The following morning she stated she had suffered from severe diarrhoea, with griping and tenesmus and pain in the epigastrium. Thirty grains of aromatic chalk powder with opium were given. A few hours afterwards I was hurriedly called in. I found the patient practically in a condition of collapse, with cold skin, slow pulse, low temperature, and pale countenance. She informed me that, feeling faint, she had eaten some sardines with bread, when shortly afterwards she was seized with an attack of shortness of breath and an intense feeling of asphyxia. She had to struggle violently for air, and for some seconds she felt as though she would be choked. She was much terrified and feared impending suffocation. The attack lasted about three minutes, leaving the patient in the exhausted condition just stated. The simplest explanation of this "asthmatic" attack can, I think, be found in regarding it as a reflex action from the stomach. It is obvious that the organ was in a slight condition of gastritis. This in itself is often sufficient to give rise to several reflex troubles. There can be little doubt that the addition of the sardines—at best a member of the tinned-fish edibles—acted as an irritant to the already highly irritable state of the mucous membrane and set up morbid changes in the nerve terminals of the vagus which caused the dyspnoea, just as in other cases it might cause palpitation. The dyspnoea may be regarded as due to direct stimulation of the respiratory centre or possibly to spasmodic contractions of the bronchial tubes. If the latter be the case it may afford an explanation of the attack of "true asthma," which is often precipitated by an indigestible meal.

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#### POISONING BY FATIGUE PRODUCTS.

BY W. ATKINSON WOOD, M.D. MELB., B.S.

A YOUNG man nineteen years of age ran nine miles in a harriers' competition across rough country on a hot, north-wind day (a very dry, enervating wind for which Victoria is noted). The full course was ten miles, but he stopped running when a mile from home. He felt in fairly good form when he started, but had not been training hard, nor had he ever run the same distance before at racing speed. He perspired pretty freely during the run, and felt well till one mile and

<sup>1</sup> Reiset: Comptes Rendus, vol. xcvi., pp. 682, 745.

<sup>2</sup> Comptes Rendus, vol. lxxiii., p. 1339.