normal; while 5, or 38 per cent., had congenital parathyroid disease. The thyro-parathyroid apparatus of only one cretin was examined microscopically, as the mother ate the other two. The clinical features of all three were similar (Fig. 1)—namely, stunted growth, curvature of the spine, low weight, and defective powers of motion. The thyroid and parathyroid glands of the cretin which was examined were completely destroyed, the parenchyma cells being almost wholly replaced by fibroblasts (Fig. 4). There is little doubt, therefore, but that the thyro-parathyroid apparatus of the other two cases were similarly affected.

Of 17 animals, born of mothers which consumed aerobic cultures on agar of faecal micro-organisms, 7 had normal and 10 had markedly hyperplastic thyroid glands. The 10 animals having disease of the thyroid were born of two mothers which consumed faecal aerobes prior to and during pregnancy. The 7 animals having normal thyroids were born of one of these mothers which consumed faecal aerobes prior to but not during pregnancy. The noxious action of the bacterial cultures was thus demonstrated. The parathyroids were found in 11 out of the 17 cases and were normal in all.

Of 25 animals, born of mothers which consumed faecal anaerobes, 8 had normal or almost normal thyroids, while in 17 the thyroid gland was markedly hyperplastic. The parathyroids were diseased in 10 out of 18 cases in which they were seen, or 55.5 per cent. The parathyroid disease consisted in marked congestion, hæmorrhages into the gland which destroy large portions of its substance, and in fibrotic changes (Figs. 2 and 3).

Three important facts are to be noted in connexion with these results: 1. That out of 16 animals, born of a goitrous mother which consumed faecal filtrate prior to and during pregnancy, 3 were born cretins, while the 47 animals born in other cages showed no clinical or pathological signs of this condition. 2. That of 31 animals, born of goitrous mothers which consumed either faecal anaerobes or the filtrate of a faecal emulsion, 15 were found to have congenital parathyroid disease. Of these, two-thirds were born of mothers consuming the anaerobic cultures, while one-third were born of a mother consuming a faecal filtrate which contained the toxic products of these anaerobes. The parathyroids were normal in 16 animals born of goitrous mothers in other cages. 3. Faecal organisms which grow aerobically on agar, while capable of causing marked hyperplasia of the thyroid gland, do not appear to be capable of producing any ill-effect on the parathyroid glands.

Conclusions.—1. Of the offspring of goitrous parents a small percentage are born cretins, approximately 63 per cent. are born with congenital goitre, 32 per cent. are born with congenital parathyroid disease, and 33 per cent. are born with normal thyroid and parathyroid glands. 2. Cretinism and congenital goitre are due to the action of toxic substances derived from the intestines of the goitrous mother on the foetal thyro-parathyroid mechanism. Cretinism represents the maximum, and comparatively rare, effect of these toxins; congenital goitre their minimum, and comparatively common, effect. Between these extremes all degrees of thyroid involvement may occur with or without associated swelling of the gland.³ 3. Congenital parathyroid disease is due to the action on the foetal gland of the toxic products of organisms, present in the intestine of the

goitrous mother, which are capable of growth under anaerobic conditions.³

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF QUININE POISONING.

BY LEONARD MYER, F.R.C.S. EDIN.

THIS is a brief account of a case of acute poisoning by quinine with a few remarks thereon. It is the more interesting because so recently as Jan. 17th and Jan. 24th there were reports of poisoning by this drug in THE LANCET and also because my patient was intelligent and able to give some definite story of the subjective symptoms after her recovery.

The patient, aged 20, was three days late with her menstrual period. She procured some quinine sulphate from two chemists, which I have ascertained amounted to 2 drachms; she partly dissolved this in lemon juice and water and drank the mixture at 2.30 P.M. A quarter of an hour after she felt "dizzy as if she were drunk." By 3 P.M. she could hear her friends talking, but could not make out what was said and soon after she was quite unconscious. At 5.30 I reached her after an urgent call. I found her comatose, her pulse was 120 and feeble, her respirations were shallow, occasionally sighing and 20 per minute. Her temperature was 98.6° F. She took no notice even when shouted at. There were obvious signs of vomiting, which had included some undissolved quinine; she was lying on her bed fully dressed. Her pupils were widely dilated. Some hot coffee was quickly prepared, but a rectal injection was prevented by the fact that the bowels had been very freely evacuated under her, likewise her bladder, and I was without adequate assistance. I therefore administered 6 minims of liquor strychninæ hypodermically and a quarter of an hour later when I shouted at her she said, "I cannot see and I don't know what you are saying." Her pulse was then much stronger and I left her with instructions to the husband to call me if he was anxious and that in any case I would come again later. I saw her again at 10.30 P.M. She was sleeping and very drowsy. I roused her by shouting. Her pupils were still widely dilated. She was unable to perceive a very strong incandescent gas light in the room, she also complained of "buzzing" in her ears. I afterwards learnt that about this time she felt "flashes of light and sound," that her feet felt cold and that they wanted to move but could not do so. The coldness spread upwards and before it reached her arms, she could move her legs. Eventually, about 6 A.M. the next day, she "could feel the parts getting well," and on being asked by her husband if she could see she stared at the strong light for five minutes before she was able to make anything out and the first thing was the clock by the bedside which "only gradually took shape." It was 24 hours more before she could see well and before

³ Proceedings of the Royal Society of Medicine (Medical Section), 1908, vol. ii., pp. 1-31; THE LANCET, Oct. 31st, 1908, p. 1275.

the buzzing ceased. She is quite well now, and needless to say her period has not appeared.

The books describe the result of a big dose of quinine and also of chronic poisoning "cinchonism." The only description of a case like mine was of the Orientals in THE LANCET of Jan. 17th (p. 174), and there the subjective symptoms are not related. Nor is any antidote stated or recommended in the books. Had I been called earlier—i.e., before coma had set in and before vomiting had taken place—the treatment would have been 30 grains of ammonium carbonate in water to precipitate the unabsorbed quinine, as an emetic and alternatively as a stimulant. Failing vomiting by this means the stomach tube and bicarbonate of soda would be indicated. In this case vomiting had occurred and it was reasonable to suppose that in the three hours which had elapsed the remainder of the "poison" had been absorbed.

The quinine was taken under the false impression that it was an emmenagogue and in the cases referred to it was taken in large doses by accident.

Cambridge-circus, W.

A CASE OF APPENDICITIS WITH SEVERAL POINTS OF INTEREST.

BY H. F. G. NOYES, M.B., B.C. CANTAB., M.R.C.S. ENG.,
L.R.C.P. LOND.

ON Jan. 2nd, in answer to a wire, I met at Worthing station the patient, a man, aged 32, on a visit to England from Australia. The history of his illness is as follows. At an afternoon pantomime performance on Dec. 31st he was seized with violent abdominal pain, which necessitated his leaving the theatre and taking a cab to a hotel. He was seen soon after by a medical man, who gave him a hypodermic injection of morphia. His temperature was 101.4° F., and pulse 104. Later in the evening he vomited. On the next day his temperature had dropped to normal and his pulse was 76. An ounce of castor oil was given, and his bowels were moved several times. The medical attendant was not satisfied with the patient's condition, and on the morning of Jan. 2nd called a surgeon in consultation. An acute perforated appendix was diagnosed and immediate operation was ordered. This the patient refused, and insisted on travelling by the first train to Worthing. A nurse was sent with him to administer brandy should the pulse become weak on the journey.

On arrival in Worthing the patient was very collapsed. The pulse was 120 and thready in character. He was conveyed to a nursing home and consented to an immediate operation. The abdomen was as "hard as a board" and acutely tender, especially in the right iliac fossa and hypogastrium. After opening the abdomen the appendix was found to run downwards into the pelvis. It was 6½ inches in length, there was a kink about 1 inch from the cæcum, and the distal end was bulbous, gangrenous, and perforated, the aperture being about the diameter of a lead pencil. The tissues were in a very friable condition, and merely the bare removal of the appendix was attempted. The cavity where the appendix lay was swabbed out, and a large soft drainage-tube left in running down into the pelvis.

The patient stood the operation remarkably well, and as soon as he had come round from the anæsthetic was placed in Fowler's position. During the next three days—i.e., Jan. 3rd, 4th, and 5th—the

patient vomited small quantities of bile, and in response to calomel by mouth and turpentine enemata passed a fair quantity of flatus. The pulse varied between 70 and 90, and was fairly full in character. The abdomen became gradually more and more distended in the epigastrium and hypochondria, the liver dulness was displaced upwards, and the "coin-sound" was elicited over an area which corresponded to an enormously dilated stomach. On the fourth day after operation considerably over a quart of faecal-smelling vomit was brought up. The patient was very collapsed afterwards, and his pulse became thready and about 130, but later in the evening he felt better and was less distended. This faecal vomiting occurred twice every 24 hours, and continued for eight days. After the vomiting the patient always felt relieved, and the epigastric distension became temporarily less. Meanwhile nourishment was administered by means of nutrient enemata.

I met Mr. W. H. Battle in consultation on Jan. 4th and 9th, and am much indebted to him for valuable advice on the case. He recommended lavage of the stomach. This I did once, but the patient was very collapsed afterwards, and asked that he should be allowed to wash out his own stomach by the natural method of vomiting. He was provided twice daily with a quart of normal saline; this he drank at one draught and ejected immediately afterwards mixed with the faecal contents of his stomach. By this means the vomit became gradually less offensive and smaller in quantity, until Jan. 14th, when he was unable to return the saline. From this day his condition rapidly improved and he began to take food by the mouth. The abdominal distension quickly disappeared and his recovery was uneventful except for a superficial stitch abscess in the abdominal incision.

Worthing.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Gastro-jejunostomy.

A MEETING of this section was held on March 10th, Mr. G. H. MAKINS, the President, being in the chair.

Mr. HERBERT J. PATERSON read a paper on Gastro-jejunostomy and the Principles which should Determine its Application. He said that during the past 15 years there had been a great improvement in the results of gastro-jejunostomy, both immediate and remote. This improvement had been attributed largely to the adoption of the "short-loop" operation. He suggested the possibility that this improvement was due, not to the particular method employed, but to a general advance in surgical technique. He pointed out that a gastro-jejunostomy opening should be as near to the pylorus as possible. This was anatomically impossible in the posterior "short-loop" operation. Therefore, the posterior "short-loop" operation was unsound physiologically, but anatomically good; the anterior operation was good physiologically, but anatomically bad. He was inclined to think that on the whole the remote results of the anterior operation were rather better than the remote results of the posterior operation. Mr. Paterson pointed out some of the mechanical defects which might prevent the patient gaining complete relief, but insisted that the chief cause of failure after gastro-jejunostomy was its performance without proper indication. He gave in detail the reasons for the views which he had been advocating for years, that gastro-jejunostomy was a physiological and not a drainage operation. It was difficult by any mechanical