name may be determined upon to distinguish the disease in its uncomplicated form, and so put an end to the present confusion of identities.

I have to thank the late Colonel C. H. Begg, C.M.G., D.M.S., N.Z.E.F., and Lieut.-Colonel C. H. Newton, D.S.O., O.C. the New Zealand Stationary Hospital, for permission to publish these notes.

FEBRILE ACIDOSIS IN SCARLET FEVER IN CHILDREN.

BY

R. E. THOMAS, M.D., B.S.LOND., M.R.C.S.,

L.R.C.P., D.P.H.,

ACTING SENIOR RESIDENT MEDICAL OFFICER, HAM GREEN HOSPITAL AND SANATORIUM, BRISTOL.

ACETONURIA has been found by Harris in 84.8 per cent. of cases of scarlet fever in children.¹ I have examined daily the urine of seven consecutive cases with moderate attacks, estimating the acidity, the proportion of urea and ammonia-amido nitrogen, and testing for acetone and diacetic acid, with the following results:

1. Acidosis lasting from three to twelve days, reaching its maximum on the third to fifth day of disease.
2. Acetone and diacetic acid not always, though generally, present.
3. Urine not alkaline during administration of sodium bicarbonate gr. 10 to gr. 15 every four hours.
4. One return of acetone, increase in ammonia nitrogen from 1.7 per cent. to 6.3 per cent., and rise in acidity from 2 per cent. to 68 per cent. N/10 acid, after halving the dose of soda.
5. Nephritis developed later in the two patients who showed the most severe acidosis.

Clinically none of the cases suggested diphtheria, but routine nose and throat cultures, to discover carriers, gave two positive results from the nose. I consider the acidosis in these cases was due to scarlet fever, although it has been shown to occur in diphtheria.²

Finding acidosis at the start of my examinations I at once gave sodium bicarbonate. As this did good in moderate and severe cases I have made it routine for all, with satisfactory results. I ask that it shall be given for a week to ten days to all children who have scarlet fever, the dose being regulated by the reaction of the urine. Further, I am so convinced that acidosis is present in every other acute febrile complaint of children that I plead for the giving of soda to them pending the proof of this contention.

Methods.

$\text{NH}_3 + \text{NH}_2$ nitrogen = formalin (BRITISH MEDICAL JOURNAL, March 25th, 1909).

Urea = hypobromite.

Acetone = sodii nitroprusside } Depth of colour.

Diacetic acid = ferri perchlor. }

Acidity = N/10 NaOH with phenolphthalein indicator.

(Neutral potassium oxalate used if urine was high coloured.)

The two following cases had nephritis; one showed it associated with acidosis on the twelfth day, starvation doing harm; both suggest the possibility that acidosis aids in determining the complication, and that early administration of soda may reduce its incidence.

CASE I.

A boy, aged 7, was admitted on the fourth day of the disease, pale and listless; pulse 120, weak; temperature, 99.2°. His condition caused some anxiety. The culture from the throat was negative, that from the nose yielded the Hoffman bacillus.

Urine: Ammonia nitrogen rose to 13.9 per cent. on the fifth day, and fell gradually to 4 per cent. on the eleventh and twelfth days. Acetone and diacetic acid were never found. Nephritis developed on the twenty-fourth day and lasted until the thirty-fourth day. The urine on the twenty-fifth day contained a trace of albumin, and hyaline and granular casts; ammonia nitrogen 1.8 per cent.; no acetone or diacetic acid.

CASE II.

A girl, aged 6, was admitted on the tenth day of disease, peeling. Temperature 97.8°, pulse 116. She was given carbohydrate diet. On the eleventh day there was no albumin, but a trace was present on the twelfth day; the temperature was then 99°, pulse 120; she had vomited. By routine treatment she was given liquor ammonii acetatis and barley water only. On the thirteenth day the child was worse; pulse 130 to 140, irregular, weaker; she was still vomiting. The urine contained a trace of albumin, and hyaline and granular casts. Acetone and diacetic acid were present. Acidity = 100 per cent. N/10 acid; ammonia nitrogen 6 per cent.

Treatment consisted of barley water, milk 1½ pints with half an ounce of sugar, and sodium bicarbonate gr. 15 every three hours. On the fourteenth day her condition was improved. Milk 3 pints with half an ounce of sugar, and sodium bicarbonate gr. 15 every four hours. She was still better on the fifteenth day: ammonia nitrogen 4.8 per cent.; acidity = 72 per cent. N/10 acid; acetone was present. Carbohydrate diet, soda continued. On the sixteenth day there was no albumin; ammonia nitrogen 2.4 per cent.; acidity = 40 per cent. N/10 acid; there was a trace of acetone. On the seventeenth day she was much improved and was taking food well. Ammonia nitrogen 2 per cent.; acidity = 8 per cent. N/10 acid; no acetone. Soda reduced to a dose every eight hours. She made an uninterrupted recovery.

I have had only two cases in adults (males aged 17 and 23). Both had increased ammonia-amido nitrogen, the younger giving 11.3 per cent. on the fourth day of illness, with acidity = 125 per cent. N/10 acid. Neither had acetone or diacetic acid. They benefited by soda, and I consider all moderate or severe adult cases should be given it.

REFERENCES.

¹ Harris, *Lancet*, 1910, vol. i, p. 1346. ² Peters, *BRITISH MEDICAL JOURNAL*, 1918, vol. i, p. 10.

NATIONAL MEDICAL TREATMENT.

BY

WILLIAM J. HOWARTH, C.B.E., M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH, CITY OF LONDON; MEMBER OF THE LONDON PANEL COMMITTEE,

AND

B. A. RICHMOND, M.D., J.P.,

SECRETARY, LONDON PANEL COMMITTEE.

In view of the fact that health matters, including the treatment of sick persons, occupy a prominent position in the social reforms contemplated by the new Government, it is desirable that the medical profession should either have some definite views as to what future action will prove acceptable to it, or be prepared to submit a scheme, approved by the majority, for the consideration of the general public.

The views of the profession, and those of the general public as represented by the law makers, on a subject which is peculiarly technical in character, and which is trammelled to a certain extent by tradition, are likely to be divergent, and the best opportunities for reconciliation are not afforded when a scheme, which represents in the main only the views of the latter section, has been prepared and submitted as part of a settled policy.

The subject is of so involved and intricate a character that it would be impossible for any single individual outside an interested Government department, to which all sources of information are available, to prepare a detailed scheme which would meet all difficulties, or which could be regarded as more than a basis for discussion.

Up to the present the chief efforts have been directed towards the elaboration of schemes which have advocated what is known as a whole time state medical service. To the generality of the profession such a scheme is not acceptable, but the difficulties associated with a part-time service have been such as have apparently rendered it difficult for those who favour such a service to formulate general principles which could be developed into a piece of efficient administrative machinery.

Alternatives.

If alterations or additions to the present method of state treatment—and the medical benefit under the Insurance Act may reasonably be included in such a term—are decided upon, one of three courses will probably be followed, namely: (a) Additional powers and responsibilities may be tacked on to the present panel system, or (b) a whole-time service may be created, or (c) a part-time service may be established based on experience gained in panel work.

The limitation of medical benefit to insured persons alone cannot continue. Another service has been added to the many competing classes of state treatment. The Insurance Act accepts no responsibility for the treatment of persons with physical defects at ages prior to the insurance age, but this would probably be met by inclusion of dependants. If such were included the intricate