here presented and of the brief follow-up period, which is measured only in months: this must be left for a later occasion. It is, however, permissible to report the immediate post-convalescence progress of these patients. Twelve out of the thirteen are on a full diet; of these, ten will admit to no symptoms, even under pressure of direct questioning; two say that there is an occasional sense of fullness after having eaten a full meal; and the last patient, who has barely finished her convalescence, complains of periodic nausea, but says that this is improving. Freedom from pain is complete and all the patients are enjoying their food. Those who had lost weight before the operation, and who have been followed up for at least three months, have recorded steady gains in weight. No suspicion of a dumping syndrome has been noted, and the constant presence of bile in the stomach has produced no ill effect.

The likelihood of anastomotic ulcer seems remote in this type of operation, where the whole of the alkaline pancreatic and biliary secretions are transferred to the stomach. Post-operative test meals have been carried out, and all show a reduction to normal levels of acidity or to complete achlorhydria. As a routine, samples of gastric juice are now aspirated at hourly intervals over a period of 24 hours while the patient is on a full hospital diet; this would seem to be a better way of getting a true picture of the changing acidity of the stomach.

While the operation described is still in the experimental stage, its initial success warrants an extensive trial. No surgeon would wish to remove the stomach in the treatment of peptic ulcer if such a drastic step could be averted. The avoidance of resection may lie along the lines suggested in this preliminary report.

I would like to express my grateful thanks to Professor C. A. Pannett, with whom this operation has been fully discussed, for his encouragement and interest. My thanks are also due to my colleagues, Dr. B. Armstrong, Dr. C. B. Lewis, and Dr. S. Guerrier, who have given anaesthesia in the first exacting cases of a new operation.

Recent contributions to the Scandinavian medical press give expression to a quite lively dissatisfaction with the multiplicity, complexity, and cost of laboratory and other tests now in vogue in many hospitals. Dr. Lennart Norrlin, of Stockholm, in *Svenska Läkartidningen*, December 8, 1950, page 2843, has nothing good to say of radiological examinations in cases of acute gastric or duodenal perforation. He refers to cases in which a radiologist's report has induced him to undertake an exploratory laparotomy, though its hopelessness had seemed obvious to him from the outset. Proper exercise of the five senses is, in his opinion, to be preferred to laboratory reports; and the hospital chief who delays his first attendance on a new case by several days in order to equip himself with a handful of laboratory reports is no model for his juniors. Referring to the prodigality with which radiologists dispense their skiagrams, Dr. Norrlin mentions a case in which a relatively simple fracture of the leg below the knee was illustrated by 17 skiagrams, of which 13 were superfluous. In a more general approach to the subject, Dr. Ole Jacob Broch, of Oslo, in *Tidsskrift for den Norske Lægeforening*, November 15, 1950, page 728, queries the usefulness of many fashionable radiological and laboratory tests. He points out that in elderly folk there are always radiologically demonstrable changes in the spine, but that to hold them responsible for all the patient's symptoms may be wide of the mark. In 1949, Roentgen diagnosis cost the health insurance funds in Oslo fully 14% of all the doctors' charges. As for electrocardiograms, Dr. Broch suggests that watching the effect on a patient of walking upstairs may be much more instructive.

A RARE BLOOD GROUP ANTIGEN OCCURRING IN NEGROES

BY

ELIZABETH W. IKIN, B.Sc.

AND

A. E. MOURANT, D.Phil., D.M.

(From the Blood Group Reference Laboratory,
Medical Research Council)

Landsteiner, Strutton, and Chase (1934) found, in the serum of 2 out of 12 rabbits that had received injections of the red cells of a negro, an antibody which agglutinated the cells of the donor and was subsequently found to agglutinate the cells of 14 out of 191 negroes but of only 2 out of 387 white persons. All those whose cells gave positive reactions were of Group N or MN. Wiener (1943) tested a further 25 white persons, who were all negative.

When testing a series of Nigerians we found one who gave positive results with three rabbit anti-N sera and negative results with two rabbit anti-M sera. With a third rabbit anti-M serum which had given normal results with many Europeans this subject gave strong agglutination. The specimen was further found to be negative with two human anti-M sera. It occurred to us that we had possibly rediscovered the antibody described by Landsteiner *et al.*, and we proceeded to look up previous results obtained with this serum, and to watch for further anomalies. One more group N Nigerian was found to be positive. In all we were able to find 43 group N negroes who had been tested with this serum, of whom two, as already stated, were positive, while all of the 173 group N Europeans and 15 group N Asiatics so tested were negative. It is probable that many other Europeans had been tested with negative results. The large number of negative Europeans shows that the antigen cannot have been Kell, Lutheran, or any of the commoner known blood group antigens.

We later tested 26 group N specimens from South African Bantu, which were kindly sent to us for the purpose by Dr. A. Zoutendyk. All were negative with several separately absorbed batches of the original rabbit serum, but the serum may by this time have deteriorated, and we had no positive control.

Of the two positive persons, the first was A₁, N, cDe/cDe (or cDe/cde) and the second O, N, CDe/CDe (or CDe/Cde).

It is unfortunate that when these anomalous agglutinations were found the rabbit which had produced the antibody had long been dead; there was little left of its serum, and that little was of course very old. We made repeated attempts to secure further specimens of blood from the positive subjects in order to immunize further rabbits, but no specimens could be obtained.

We do not claim to have proved that the antigen found by us is the same as that described by Landsteiner *et al.*, but the resemblance is suggestive. The difference in frequency between negroes and Europeans for the antigen of Landsteiner *et al.* is statistically highly significant, and this fact alone makes it desirable to recover the antibody and use it for further anthropological investigations. The association with N and MN is significant but not highly so. If the antibody is

recovered it will be important to investigate its possible relation to the MNS system and to find out whether, for instance, the gene controlling the antigen is an allele of S and s, or possibly occupies a third locus closely linked to those for MN and Ss. The rabbit which yielded our serum had been immunized only with the red cells of group M persons. If the new antibody is an immune one, therefore, the antigen must in this case have been present in the blood of an M person. If this is so the slight possibility is eliminated that the agglutinations observed were the property of a rare allelic variety of N.

A Suggestion

Our object in describing this somewhat abortive investigation is to draw attention to the existence of one or possibly two antigens which appear to be commoner in negroes than in Europeans, antigens which are possibly related genetically to the MNS blood group system, and to which rabbits fairly readily make antibodies. It is also possible that such an antigen might, on very rare occasions, if present in blood used for transfusion, provoke the development of the antibody in the serum of the recipient. We should therefore like to suggest that workers who, unlike ourselves, have direct access to negro populations should consider making an attempt to repeat the preparation of such an antibody and to investigate the genetics and anthropology of the antigen detected by it. It is suggested that several batches each of about 10 rabbits should be immunized with the pooled red cells of about 20 group N negroes, each batch of rabbits being injected with a different pool of negro cells. As some group N negroes certainly carry the antigen and group M negroes may not, it seems best to choose only those of group N, whatever may be the true genetic relationship of the "new" antigen. The serum of each rabbit should be divided into two or three portions and each portion absorbed with the red cells of one group A₁, MN European, and then tested against the cells of each of the negro donors.

We shall be glad to exchange sera (including anti-M and anti-N) with any worker who is contemplating such an investigation, or with any worker who has found anti-M or anti-N sera giving anomalous results, or who has discovered an unidentifiable antibody in the serum of a patient transfused with the blood of one or more negroes.

At the time of going to press we have just obtained a further sample of the blood of the original positive subject, through the kindness of Dr. D. R. Cannon and Mr. N. A. Barnicot. We are continuing our investigations with the collaboration of Dr. J. N. Marshall Chalmers.

We are indebted to Dr. D. R. Cannon, of the Yaba Medical Research Institute, Lagos, for sending the specimens and to Dr. J. A. Fraser Roberts for advice on statistics.

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Adrenocorticotrophic hormone being in very short supply, every possible source is being explored. In *Nature*, February 17, page 280, is a brief note on its preparation from whale pituitaries by Norwegian workers. One kilo of pituitaries, from about 50 fin whales and blue whales, was extracted by methods similar to those used on pig and sheep pituitaries and yielded 0.5 g. A.C.T.H. with an activity equal to 1.4 times the Armour standard.

Medical Memorandum

Islet-cell Tumour of the Pancreas

Islet-cell tumour of the pancreas is a well-recognized, though uncommon, cause of spontaneous hypoglycaemia. It may occur at any age, but is rare in infancy and after the age of 50. Most cases are found between 20 and 50, although a case in a 24-hour-old infant has been reported (Sherman, 1947). Our patient was 69, older than any other upon whom a successful operation has been performed. Howard, Moss, and Rhoads (1950) summarized all the 398 cases described up to 1950. Of these, some 200 have been operated upon for hyperinsulinism. In 150 patients the tumour or tumours were enucleated, while in about one-third of this number, no tumour being found, a partial resection of the pancreas was carried out. The operative mortality was about the same in both types of operation (9%), and the end-results were good in both sets of survivors, some 85% being cured.

With its diverse symptomatology the disorder may readily be mistaken for epilepsy, cerebral tumour, neurosis, psychosis, narcolepsy, and many other conditions. In elucidating such symptoms, islet-cell tumour may profitably be remembered. The case here reported is typical except for the age of the patient.

Case Report

A married woman aged 69 was admitted to hospital on January 23, 1950. In childhood she had had attacks of measles, whooping-cough, and bronchitis, but during forty years of married life had had no illnesses or operations, apart from mumps some 20 years ago. She was an only child; her parents died in old age and she had a healthy son and daughter.

Earlier Symptoms

Symptoms due to the islet-cell tumour had first appeared in 1945, when one morning she failed to waken, remaining unconscious until 11 p.m. that day. She then recovered spontaneously, ate a meal, and slept throughout the night. She remained well until November, 1946, when, after an attack of tonsillitis, she again failed to waken at the usual time. Four or five similar attacks followed, consciousness being regained in the afternoon or evening. On November 12 she was first admitted to the Royal South Hants and Southampton Hospital for investigation. She was seen to be a healthy-looking woman, and appeared rather younger than her age. Mentally she was a little vague and was inclined to repeat phrases. Her speech was slurred. Examination of her central nervous system revealed no abnormalities. The arcus senilis was present. The blood pressure was 170/110 mm. Hg, but the heart was otherwise normal. No abnormalities were noticed in the chest or abdomen. Lumbar puncture showed a normal fluid.

On November 15 she refused her lunch and lapsed into semicomatose. The blood sugar was 38 mg. per 100 ml. On November 17 two further attacks occurred, which were relieved 20 minutes after the oral administration of 10 g. of glucose. Next day another hypoglycaemic episode responded to intravenous administration of 50% glucose solution. On November 19 a glucose-tolerance test was performed, with these results: 8 a.m. (fasting), 44 mg. blood sugar per 100 ml. (capillary blood); 50 g. glucose was then given orally; 8.30 a.m., 99 mg.; 9.45 a.m., 117 mg.; 10.15 a.m., 153 mg.; 10.45 a.m., 124 mg.

On November 27 the patient had no breakfast, and two-hourly samples of blood were taken, the glucose content of which was: 8 a.m., 47 mg. per 100 ml. (capillary blood); 10 a.m., 38 mg.; noon, 35 mg.; 2 p.m., 31 mg.; 4 p.m., 89 mg. She thus fulfilled the diagnostic criteria of Whipple for the diagnosis of hyperinsulinism, which are that (1) the