wound around the pedicle of the volvulus and was free from constriction. The entire jejunum and ileum were implicated in the volvulus. They presented an extraordinary appearance, being deeply cyanosed, quite collapsed and empty, and massed into a compact bunch, which depended freely from the narrow pedicle of the superior mesenteric axis. The mass of congested, collapsed bowel could be most accurately likened to a conglomeration of bluish earthworms. The mass was rotated in an anti-clockwise direction through about 360 degrees. A few light, recent adhesions were present about the constricted portion of the duodenum; these were readily separated and permitted the organ to come into its natural position behind the mesenteric root. So soon as the constriction of the duodenum was relieved by untwisting the volvulus, the gaseous and fluid contents of the dilated stomach and upper duodenum passed rapidly down the jejunum and had entered the ileum before the bowels could be returned to the abdomen. Since the infant was seriously ill from four days of acute duodenal obstruction, it was thought unwise to prolong the operation by fixing the replaced intestines. It was hoped that this would occur naturally in the course of post-natal development. The abdomen was closed. The operation had been a very easy and rapid one.

Progress.—No further vomiting occurred, and the infant took the bottle well within three hours of operation. An uninterrupted convalescence ensued and she was discharged from hospital on the fourteenth day. She has been seen at regular intervals since. She has progressed quite normally; there has been no vomiting, no evidence of abdominal pain, and a steady gain in weight. At the last report (November 23rd, 1926) the child appears a particularly robust little girl of 6 months, weighing 12 lb. 12 oz.

I regard this case with peculiar satisfaction, as it represents to me the outcome of former embryological and pathological researches in practical diagnosis and operative cure.

REFERENCE.

¹ N. M. Dott: Anomalies of Intestinal Rotation: their Embryology and Surgical Aspects: with report of five cases. *Brit. Journ. Surg.*, 1923, xi, 251-286.

HAEMATURIA FOLLOWING INSULIN INJECTIONS.

BY

JOHN HENDERSON, M.D., CH.B., F.R.F.P.S.G.,
VISITING PHYSICIAN TO GLASGOW ROYAL INFIRMARY.

IN 1923 and 1924 I noted several cases of diabetes mellitus in which the use of insulin injected in the usual manner was associated with a transient haematuria. I could not trace any records of similar cases, and on inquiry of other physicians who had a large experience of insulin administration I did not get any corroborative information. While noting the facts I decided to await further confirmation, as apparently the occurrences were simply coincident and of no serious moment. Since then, over many hundreds of similar injections in private and hospital practice, and in many cases with large daily doses, I have never met with a similar experience. I have also been watching the literature of the subject for any reference to the occurrence of haematuria in similar circumstances, but without avail till in the *Epitome* of the BRITISH MEDICAL JOURNAL of October 23rd, 1926 (para. 364), I found J. Gudemann reported as having described a case of haematuria following insulin treatment. As the history of the case was there given it need not be repeated here. Gudemann referred to two other cases, and stated that all his own cases of haemorrhage after insulin treatment occurred in a period of four and a half years; he thinks it probable that haemorrhages after insulin treatment occur more frequently than has been believed hitherto.

As such occurrences have not apparently been noted in this country I wish to refer to three cases, in all of which a very transient haematuria was observed.

CASE I.

A boy, aged 13, was admitted to my ward on October 23rd, 1923, in a state of coma, and on that day he had 20 units of insulin on two occasions. He made a rapid recovery from coma, and next day felt very well, though he had very decided haematuria. Microscopic examination of the urine showed, in addition to blood corpuscles, a few hyaline casts. The haematuria cleared up completely within twenty-four hours, and did not recur, though he had regular daily doses of insulin during the remainder of his residence. He is still under regular supervision at intervals, and though regular doses of insulin have been given, no similar occurrence has been observed. He is well developed and sturdy.

CASE II.

A man, aged 32, with advanced diabetes, had three attacks of haematuria during one month. He started insulin treatment in my ward on September 20th, 1923, and was at one time having 50 units daily. He developed severe haematuria on October 30th, and had recurrences on November 5th and November 27th. On each occasion the attack persisted for a few days, was not associated with any discomfort or signs of kidney disease, and cleared up completely.

CASE III.

A man, aged 59, had marked diabetes, requiring a daily dose of 40 units over a prolonged period. In May, 1924, in a nursing home, he had an attack of haematuria lasting twenty-four hours. Here also there were no associated symptoms of renal disease, and no feelings of discomfort.

I am tempted to add a fourth case of haemorrhage in similar circumstances, though it was not haematuria.

The patient was a man, aged 73, who had suffered from diabetes some time, but had not had insulin. When I saw him with his doctor on June 8th, 1924, he was on the verge of coma and became comatose before he reached the nursing home. With insulin in considerable doses he recovered consciousness completely, but four days thereafter he had a cerebral haemorrhage, with resultant hemiplegia, and died.

These cases all occurred within a period of about eight months, and, it is of interest to note, rather earlier than those referred to by Gudemann. I have no explanation to offer as to the cause of such haemorrhage, as the conditions of administration of the drug were at all times as nearly as possible the same, and, of course, in the cases in the ward others were having the same insulin without any haemorrhage. It would be interesting to know if other examples are on record of similar occurrences during insulin administration.

STUDY OF AN ANAEROBIC STREPTOCOCCUS.

BY

C. E. JENKINS, M.R.C.S., L.R.C.P.,
PATHOLOGIST TO SALFORD ROYAL HOSPITAL.

ANAEROBIC streptococci have been described before, and according to Douglas's observations they were sufficiently common in war wounds to render anaerobic culture of pus so obtained a matter of practical importance.¹ But the occurrence of these organisms in civil practice in England is sufficiently rare to justify record.

The streptococcus now described was isolated from an abscess in the lumbar region. The films showed chains of eight to ten cocci; no other organism was seen, and an examination for tubercle bacilli by the Ellermann and Erlandsen concentration method was negative.

Cultural Features.

A serum nutrient agar slope was inoculated, but no growth followed. As it was assumed that the inoculation was at fault a second slope was used, with a like result. The pus was then put on a "plain" agar plate and incubated anaerobically. A profuse growth was obtained in eighteen hours. The colonies were round, discrete, and about 0.5 μ in diameter. On inoculating a slope from this plate and incubating it aerobically no growth was obtained. The anaerobic subcultures grew well. An aerobic culture made from the fifth anaerobic culture showed a feeble growth in twenty-four hours which did not improve with further incubation. This was the only aerobic culture obtained, as attempts to repeat aerobic cultivation from later anaerobic subcultures have all failed. The addition of serum to the agar plates does not seem to influence the growth. In plain agar slabs and in gelatin at 22° C. the organism grows as a granular line along the length of the stab. The gelatin is not liquefied.

It should be explained that unless otherwise stated all further descriptions of growth and fermentative reactions refer to anaerobic cultivation.

The organism rapidly lost its chain formation in artificial cultivation, and so was tested in tomato extract media.² A tube of tomato broth was inoculated from a nutrient beef broth culture that showed clumps only in films made from it. Next morning a thick turbidity was present in the tomato broth, and a film showed nothing but chains of 12 to 16 cocci. The same result was obtained with a tomato slope, except that the chains were a little shorter. The thickness of the growth in the broth and on the slopes has since proved that tomato extract is much the best medium for cultivating the organism. The individual cocci do not show any great tendency to produce involution forms. The organism is, of course, Gram-positive.

Fermentative Reactions.

No gas was produced with any sugar, but the acid production, when obtained, was sharp, appeared within twenty-four hours, and did not change with further incubation up to five days. Acid was