damage, pyramidal tract lesions and peripheral neuropathy occur in varying degrees. It is in the preponderance of one or more of these features that cases from one area differ from those of another.

From Nigeria, Money\(^5\) has reported a number of cases whose disability was mainly a sensory ataxia, indicating posterior column degeneration and in whom spasticity was relatively rare. In most cases these findings were associated with mucocutaneous lesions of vitamin B-complex deficiency. Similar cases have been described by Haddock and his colleagues from Tanganyika.\(^8\)

In the Congo the disease known as *konzo* or 'epidemic spinal paralysis of the Congo' has features of which pyramidal tract damage is predominant and sensory deficit less marked.\(^9\) In Jamaica cases of unexplained neuropathy can be divided into 2 broad groups. The disease which has come to be known as the Strachan-Scott syndrome, or 'central neuritis', is predominantly a sensory ataxia often associated with malnutrition. In other cases, described by Cruickshank,\(^10,11\) the main feature is pyramidal tract damage, and sensory loss is less usual. This spastic variety resembles our cases in clinical features as well as in the absence of florid signs of malnutrition.

A similar spastic disorder occurs in certain parts of India and its name, lathyrism, reflects the supposed cause. It is thought to be due to ingestion of products of plants of the species *Lathyrus*. There is some experimental proof to substantiate this toxic action,\(^12,13\) but an identical syndrome has been reported from other parts of India where *Lathyrus* is not consumed.\(^14,15\)

Reviewing the unexplained tropical neuropathies very broadly, and ignoring individual variations in small groups of cases, it appears that there are 2 main varieties which merge imperceptibly. The present series of cases from Natal shows features akin to those of the spastic group, though there is some coalescence with the ataxic variety. It seems unlikely that the neurological disturbance in our cases can be ascribed to malnutrition. The similarity to lathyrism may incriminate a vegetable toxin, but the species of *Lathyrus* which are inculpated in India are not cultivated for human consumption in Natal.\(^16\) There is, however, experimental evidence to suggest that other legumes, common in Natal, contain toxic factors which may only be destroyed by adequate preparation.\(^17\)

The clinical features of our cases therefore resemble most closely those of the spastic syndrome seen in Jamaica, and those of lathyrism. Without greater knowledge, especially regarding its pathology, the grounds for proposing any aetiological hypothesis are extremely tenuous. The most likely explanation is that it is a subacute degeneration of the spinal cord produced by a toxic dietary factor.

### SUMMARY

Forty-one cases of unexplained spinal cord disorder are analysed. The cases showed a certain homogeneity in their neurological features. Pyramidal tract involvement was dominant, and sensory deficit usually minimal or absent. Investigations excluded common causes of spinal cord disorder. It is likely that this syndrome has an unusual cause. It may be related to lathyrism and to a similar spastic condition described in Jamaica.

I wish to thank Prof. S. A. Hulme and Dr. H. de Muelenaere of the Faculty of Agriculture, Natal University, for information on legumes and their toxicity. My thanks are also due to Dr. D. Ranking, Medical Superintendent, for permission to publish.

### REFERENCES


### ACTIVE CHRONIC HEPATITIS ASSOCIATED WITH RENAL TUBULAR ACIDOSIS AND SUCCESSFUL PREGNANCY

Y. K. Seedat, M.B. (N.U.I.), F.C.P. (S.A.), Assistant Physician and Lecturer and E. R. Raine, M.B., Ch.B. (Cape Town), Medical Registrar, Department of Medicine, University of Natal and King Edward VIII Hospital, Durban

Recently a number of authors (Waldenstrom,\(^1\) Bearn et al.,\(^2\) Willcox et al.) have described a chronic progressive form of liver disease usually occurring in young adults and characterized by icterus, hepatosplenomegaly, a histologic picture of hepatic parenchymal cell damage, massive fibrosis and portal lymphocyte infiltration, hypergammaglobulinaemia (20 G/100 ml. or higher) and elevated serum transaminase levels. Mackay et al.\(^3\) termed this condition 'lupoid hepatitis'; Page and Good,\(^4\) judging from the hepatic histologic picture used the term 'plasma cell hepatitis', while Read et al.\(^5\) called it 'juvenile' cirrhosis. Most recently Sheila Sherlock\(^6\) has suggested the name 'active chronic hepatitis'.

This paper describes an instance of its association with renal tubular acidosis (RTA) and suggests the role of autoimmunity in their pathogenesis.

### CASE REPORT

**First Admission**

A Bantu female, aged 21 years, was admitted in January 1963 with an 8-month history of jaundice, generalized itching and amenorrhea. She had received no drugs previously. There was evidence of scratching on the skin and enlargement of liver and spleen.

**Investigations**

- Serum albumin 3.4, serum globulin 4.9, serum gammaglobulin 2.0 G/100 ml., haemoglobin 12.0 G/100 ml., white cell count 6,000/cu.mm., blood urea 25 mg./100 ml.
- The stools were stercobilin free. The urine contained a trace of protein and 10 leucocytes/high-power field and culture yielded a heavy growth of *B. coli*.

**Summary**

Forty-one cases of unexplained spinal cord disorder are analysed. The cases showed a certain homogeneity in their neurological features. Pyramidal tract involvement was dominant, and sensory deficit usually minimal or absent. Investigations excluded common causes of spinal cord disorder. It is likely that this syndrome has an unusual cause. It may be related to lathyrism and to a similar spastic condition described in Jamaica.
ings are shown in Table I. X-ray examination of the abdomen showed calcification in the region of the right kidney and intravenous pyelography (Fig. 1) confirmed that multiple calculi were present in the right renal pelvis, which was hydrenephrotic.

A biopsy specimen of the liver (April 1963) was reported to show 'irregular fibrosis and distorted structure. There is rather diffuse inflammatory infiltration including a few plasma cells. Cholestasis is heavy.' The patient was treated with 60 mg. of prednisone daily, the serum bilirubin dropping to 2.4 mg./100 ml. After 6 weeks she left hospital against advice and steroids were discontinued accordingly.

**TABLE I. BLOOD INVESTIGATIONS**

<table>
<thead>
<tr>
<th></th>
<th>First admission</th>
<th>During pregnancy</th>
<th>After pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum bilirubin (mg/100 ml)</td>
<td>17.6</td>
<td>20.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Serum alkaline phosphatase (K.A. units/100 ml)</td>
<td>28</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Serum cholesterol (mg/100 ml)</td>
<td>850</td>
<td>830</td>
<td>830</td>
</tr>
<tr>
<td>SGOT units/100 ml</td>
<td>850</td>
<td>830</td>
<td>830</td>
</tr>
<tr>
<td>Serum alkaline phosphatase (normal 0-40 units/ml)</td>
<td>80</td>
<td>92</td>
<td>80</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Certain features in this case are consistent with a diagnosis of 'active chronic hepatitis': the age of the patient, the icterus, the hepatomegaly with characteristic hepatic histology, the splenomegaly, hypergammaglobulinaemia and elevated serum transaminase levels. The duration of the illness suggests a late phase of the disease. Alternatively the picture is consistent with a chronic persistent hepatitis, with marked cholestasis, following viral hepatitis.

Renal calculi are uncommon in the Bantu in Natal (Wise and Kark). Since Wrong and Davies found nephrocalcinosis in 73% of their patients with RTA it is possible that in this case the renal calculi were related to RTA.

The persistence of urine pH over 5-7 and the development of a metabolic acidosis after loading with ammonium chloride, satisfy Randall and Targgart's conditions for the diagnosis of RTA. Huth et al. in their classifi-
cation of the causes of RTA do not mention autoimmunity. A genetic study as reported by Randall and Targgart and Seccombe in 1961, and in this case, but there was no family history of symptoms referable to RTA. Albright et al. considered pyelonephritis to be a cause of RTA. However, as suggested by Huth et al., the pyelonephritis in this patient probably resulted from nephrolithiasis.

Read et al. in their paper on 'juvenile' cirrhosis found a patient with RTA and another with nephrocalcinosis at necropsy. In 3 cases the syndrome of polyuria, thirst and hypokalaemia was present. They state that 'renal disease complicating liver disease is well recognized', and cite as forms of renal disease associated with 'juvenile' cirrhosis, lupus nephritis (Taft et al.), chronic nephritis (Willcox and Isselbacher) and transient albuminuria (Page and Good). It is possible that the hepatic and renal lesions in the present case are the result of an autoimmune mechanism in view of the positive latex fixation test (Bouchier et al.), hypergammaglobulinaemia (Read et al.), positive antiglobulin Coomb's test and presence of thyroid antibodies in the serum (Roitt et al.).

Amenorrhea and infertility are usual in 'active chronic hepatitis' and successful pregnancy has rarely been recorded (Slater; Bearn et al.; Joske et al.). Hepatic function deteriorated during pregnancy in the present case, as reflected in the serum bilirubin and alkaline phosphatase levels.

SUMMARY
A case of 'active chronic hepatitis' associated with renal tubular acidosis is described. The possibility of an autoimmune mechanism underlying both lesions is suggested.

Another instance of successful pregnancy in 'active chronic hepatitis' is recorded.

We wish to thank Prof. Sheila Sherlock of the Royal Free Hospital, London, for her valuable advice and by experiment in writing this paper; Prof. E. B. Adams for helpful criticism; Dr. Peter Scheuer of the Royal Free Hospital, London, for reporting on the biopsy specimens of the liver; Dr. N. Shapiro, under whose care the patient was; Dr. M. Kallum and Dept. of Pathology, for her helpful cooperation; and Dr. R. M. A. Nupen, Acting Medical Superintendent, King Edward VIII Hospital, for permission to publish this paper.

REFERENCES

EXTRACTS FROM THE WORLD MEDICAL JOURNAL
THE DOCTOR IN WEST GERMANY*
Abstracted by Dr. LESLIE CHAIT, Rondebosch, Cape

Anyone who wishes to practise medicine in West Germany must be in possession of legal permission, known as an 'approbation'. The legal conditions for granting such registration are set out in special regulations. According to these, medical education lasts for at least 7½ years. Six weeks of nursing service precede the 5½ years spent in university studies in a medical faculty; finally 2 years of work as a 'medical assistant' (equivalent of our houseman), intervenes between university studies and approbation. The overwhelming majority of doctors in West Germany and West Berlin (at present about 48,300) are in 'free practice'. 'Free practice' has no equivalent in English; it means practice in which the doctor is not salaried or employed full-time either in a hospital or an official position. It is thus often a combination of private practice and insurance or panel practice. The remaining physicians either work in hospitals, or are teaching and doing research in universities and scientific institutes, or have official positions in public, government or local services, or work as industrial medical officers, in the pharmaceutical industry or in the medical services. About four-fifths of doctors working in hospitals are assistant doctors, corresponding to senior residents or junior visiting staff. Most of these doctors working in hospitals are only there temporarily, until they can establish themselves either as a general practitioner or a specialist. Of doctors in private practice, 65% are general practitioners and about 35% specialists, but in the last 15 years a trend towards specialization has set in and this will raise problems in medical care.

The doctor in West Germany is naturally subject to common law in the exercise of his profession and also to a set of official regulations drawn up by his own elected bodies, the medical associations. Violations of these regulations involve appearance before a professional tribunal.

Specialization
In contrast to the regulations for general medical education laid down by the state, the training of specialists is strictly an affair of the medical associations and is governed by the medical profession itself. There are now 16 specialties recognized: Internal medicine, chest diseases, paediatrics, neurology and psychiatry, dermatology and venereology, ear, nose and throat diseases, anaesthesia, radiology and clinical pathology. Recognition as a specialist means a period of work as an assistant doctor associated with the specialty. This work must be carried out in German university clinics or institutes or the hospitals recognized by the medical association, or it may for a limited period be done in the practice of a specially recognized specialist. Any hospital approved for training must measure up to certain standards guaranteeing a comprehensive training in scientific and practical aspects. Training abroad may be counted towards the total training if