base of the left lung. Aspiration of this area produced 3 ml. of pus which grew pneumococci on culture. Her pyrexia did not clear up on treatment by penicillin, but rapidly subsided as soon as streptomycin was given. On February 8, 1953, there was a sudden recurrence of the pyrexia and the signs of collapse of the left lung reappeared. X-ray examination showed total collapse of the left lung, and she was referred to the Liverpool Thoracic Surgical Centre for bronchoscopy. This was carried out on February 12, and a raspberry-like mass of granulation tissue was seen blocking the left main bronchus. The child's larynx would not admit a child-sized bronchoscope, and so the infants' bronchoscope had to be used, and this would not admit a suitable biopsy forceps. A sucker was therefore passed beyond the mass and a good deal of secretion aspirated. After this the patient's condition improved and x-ray examination on February 17 showed considerable clearing, although some opacity persisted at the left base. A bronchogram showed a filling defect of the left main bronchus with some bronchiectasis. Her general condition remained satisfactory.

On May 18 bronchoscopy was repeated with a suitable-sized bronchoscope. The tumour was clearly seen above the left upper lobe opening, and after taking a portion for biopsy it was found possible to remove most of the tumour with the forceps. The biopsy was reported on by Dr. Francis Whitwell as follows: "The tumour is composed of spindle-shaped cells arranged in intersecting bundles, which enclose some clefts of respiratory epithelium. There is a diffuse polymorph infiltration throughout the tumour. Individual tumour cells have elliptical fairly regular nuclei and elongated cytoplasmic processes, and mitoses are present but infrequent. This is either a fibroma or a fibrosarcoma, more probably the latter though of a low rate of malignancy, and it may be a secondary tumour. Further sections will be cut, and another report will follow." The further sections supported the previous opinion that this was a slow-growing spindle-celled sarcoma.

On June 1 a left pneumonectomy was undertaken through an intercostal incision. There were large numbers of hilar glands, which were removed with the lung, but otherwise no difficulty was encountered. A large lung hernia from the right side was noted. The patient made a straightforward rapid recovery.

The report on the removed lung was as follows: "A small, aerated lung (left) with firm interlobar adhesions and a thickened pleural membrane. Numerous enlarged lymph nodes are present at the hilum around the bronchi. The main left bronchus contains a rough plaque, 6 by 3 mm., on its lateral wall just above the origin of the upper-lobe bronchus. Section through this plaque shows it to be limited to the bronchial wall, though an enlarged lymph node is adherent to the outer wall of the bronchus at this site. There is some bronchiectasis of mild degree in the upper lobe and severer changes are present in the lower lobe. Microscopically the rough plaque shows the scanty remains of a cellular fibromatous tumour which has arisen from the subepithelial tissues of the main bronchus, and which is confined to that area, with no invasion of lymph nodes."

COMMENT

From the scanty literature available it appears that fibrosarcoma of the bronchus is unlikely to produce distant metastases, but is locally invasive and likely to recur if not radically removed. Its behaviour may perhaps be compared to that of desmoid tumour of the abdominal wall.

Our patient presented with bronchial obstruction, and the most likely diagnosis was thought to be tuberculous mediastinal adenitis, with rupture of tuberculous granulation tissue into a bronchus. Only by biopsy were we able to arrive at the correct diagnosis. It is not unreasonable to suppose that this tumour is less rare than the literature suggests. The present insistence on diagnostic bronchoscopy is likely to lead to the discovery of many cases which previously would have been diagnosed clinically as tuberculosis or carcinoma.

In our case the choice of treatment lay between local excision of the tumour with repair of the bronchus and radical excision of the whole lung. The conservative operation might have been justified in an adult with poor pulmonary function, and such an operation has in fact been used by one of us in the treatment of adenoma of the bronchus in an elderly adult. Recurrence sooner or later is, however, the rule, and in a child of 5, who is well able to compensate for the loss of one lung, only the radical operation could be contemplated. The report on the specimen suggests that cure is likely.

We gratefully acknowledge the help of Dr. White Jones, who collaborated with us throughout in the treatment of this patient, and of Dr. Francis Whitwell, who reported on the specimens.

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Bilateral Recurrent Bell's Palsy

Recurrent facial palsy is uncommon, and more than one recurrence is very unusual. Patients who have had three attacks are recorded by Huet and Lejonne (1907), Langmead (1920-1), Viole (1937), and Stone (1950). The case described here has had four clear-cut and well-separated episodes; two on each side. I cannot find any authentic case in the literature with as many attacks.

CASE REPORT

The patient, a healthy-looking farmer aged 48, attended the medical out-patient clinic of the West Cornwall Hospital, Penzance, on February 2, 1951. He complained that he was unable to move the left side of his face. The attack had come on suddenly four days previously and had been preceded by three days' slight ache behind the left ear. He also complained of loss of taste. There had been no pain in the ear, impairment of hearing, or sore throat. In himself he felt very well. There was no family history of facial paralysis.

He gave a previous history of three distinct episodes of complete unilateral facial palsy. His first attack, in January, 1936, had not been preceded by pain, and had been left-sided, sudden, and complete. He had lost his sense of taste at its onset. Treatment had been by local massage with liniment, which he had performed himself. The duration of the paralysis had been four weeks. Recovery was complete.

The second attack occurred in January, 1939, and was exactly similar in onset, but this time it involved the right side of the face. Taste was again impaired. The attack was treated in the same fashion, but lasted for eight weeks. During the attack his right eye became infected, but this soon cleared. Full recovery was made.

His third attack was in September, 1950; this, like the second attack, was right-sided, and taste was again impaired. After two weeks he had a course of galvanic current to the facial muscles. Improvement apparently ceased after about six weeks and recovery was not complete. There was only

a slight residual deformity and asymmetry, which was scarcely noticeable with the patient's face in repose. After this attack he was found to have infected teeth, and these were removed.

On examination no abnormal findings were found in his chest, heart, or abdomen. He had the physical signs of a complete left facial palsy, including loss of taste in the anterior two-thirds of the left side of the tongue. There was no movement in any of the left facial muscles. No other abnormal neurological signs were found, and no evidence of any throat or ear lesion. The latter was confirmed by an E.N.T. consultant. All further examination was negative and there was no evidence of a focus of infection anywhere. Recovery began 10 days after his first attendance, and after a month he could close his eye, and all other movements had partially returned. He was treated by a fortnight's course of galvanism and then by self-massage and exercises. He had a splint provided for the corner of his mouth, and this he wore at night. When it was seen that recovery was proceeding rapidly no further physiotherapy was given and he returned to work. After two months recovery was almost complete, and when seen some time later there was no weakness at all on the left side, but the permanent slight changes on the right were noted.

COMMENT

It is interesting to note that three of this patient's attacks occurred in January, though no seasonal incidence has been noted in Bell's palsy. All the four episodes were similar, including the impairment of taste in all the attacks. These attacks ran very much the same course, and it is of interest to note that physiotherapy in the form of galvanism made little, if any, difference to the time taken for recovery. In fact, the only attack which left any residual deformity was one of the two for which he had physiotherapy. It is, in any case, doubtful whether electrical stimulation is of value in facial palsy. Indeed, Walshe (1947) states that in no case can it be said that electrical stimulation of the paralysed muscles by galvanism serves any useful purpose.

My thanks are due to Dr. W. H. St. John Brooks for permission to publish this case.

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Extreme Anaemia with Recovery, Associated with Pigmentary Changes in the Hair

This case shows that a haemoglobin level of 0.7 g.% (5% Sahli) is compatible with life and moderate activity.

CASE REPORT

An aboriginal Malay boy aged about 10 years was found in his forest clearing to be suffering from breathlessness on exertion, slight cough, dizziness, retrosternal pain, and occasional fever, which had all developed over several years.

Examination revealed the following abnormal physical findings: breathlessness on walking, but comfortable at rest; very pale puffy face; slight oedema of ankles; white smooth tongue and angular stomatitis; hair dry, lustreless, and rough, with a well-marked brown colour not normally found in his tribe; apex beat in the sixth intercostal space, mid-axillary line; harsh systolic murmur particularly at the base; blood pressure 90/40; pulse 120; liver palpable three fingerbreadths below the costal margin.

Laboratory investigations on the day of admission showed: Marrow, normoblastic; white blood cells, 7,600 (polymorphs 67%, lymphocytes 31%, eosinophils 1%, normoblasts 1%); serum iron, 85 g.%. Stools contained ova of

Ancylostoma duodenale, *Ascaris lumbricoides*, and *Trichuris trichiura*, and 4.3% fat. Occult blood, positive. Blood film for malaria, negative. Blood Kahn test, negative. Serum bilirubin, 0.4%; alkaline phosphatase, 11 King-Armstrong units. Thymol turbidity, 1.5 units.

Treatment.—On admission 50 mg. of saccharated iron oxide was given intravenously, the amount then being increased to 100 mg. daily up to the ninth day; total dosage, 950 mg. On the 20th day the patient received tab. ferri. sulph., 2 gr. (0.13 g.) three times daily after meals. On the 36th and 43rd days he was dewormed, 2 ml. of tetrachlorethylene being given on each occasion.

Table of Progress Findings

Day	Hb (g.%)	Erythrocytes (10 ⁶ per c.mm.)	P.C.V. (%)	M.C.V. (cubic μ)	M.C.H.C. (%)	Reticulocytes (%)	Total Hb (g.)	Plasma Proteins (g.%)	Plasma Albumin (g.%)	Plasma Globulin (g.%)
0	0.7	1.00	7.0	70	10	0	64	5.07	2.93	1.89
3	2.1	1.13	9.0	80	23	33				
6	3.0					11				
9	3.6	1.48	19.0	128	19	9				
14	6.1	2.73	26.5	96	23	6				
22	6.6	2.76	32.0	115	21	1		7.22	3.91	3.06
29	8.9	3.41	35.5	104	25	1				
36	10.0	3.52	38.0	108	26	0				
43	11.9	4.16	38.0	91	31	0	367	6.84	3.32	3.27

All blood samples were removed by venepuncture.

He improved rapidly with treatment; all symptoms and signs receded except that the hair remained unchanged and the liver was still palpable at one fingerbreadth.

COMMENT

In the past few months one of us has seen several patients with very low haemoglobin values (1.6, 1.95, and eight with 2.0-2.5 g.%), but we have not seen or heard of a value as low as 0.7 g.%.

Haemoglobin values were estimated by the cyanmethaemoglobin method, two tubes being used; and, while at this low range the degree of accuracy is not as good as at higher levels, the value for this boy was undoubtedly below 1 g.%, and a finger could be seen through the column of oxalated blood in a test-tube. The rapid rise of haemoglobin and packed cell volume and the high reticulocytosis indicated full response to the intravenous iron. It will be noted that the presence of the hookworms during treatment with iron did not hinder blood regeneration, nor was there a secondary reticulocytosis following the vermifuge.

The hair dyspigmentation is interesting in view of a similar condition found in kwashiorkor. Brown hair in the black-haired peoples of Malaya is fairly common among the malnourished, especially children, and in those exposed to seawater and sun. The cause of this pigmentary change has not been discovered. In this boy it is unlikely to be due to a general protein deficiency, as the plasma protein values were not grossly abnormal and neither did they fall with the rapid blood regeneration as might occur in a protein-deficient patient. Browning of the hair has not been reported in hookworm infestation in which the possibility of dietary disease has been excluded.

Severe iron-deficiency anaemias in Malaya differ from those in the United Kingdom in that koilonychia is extremely rare, nor is the Plummer-Vinson syndrome ever seen; but angular stomatitis which heels with iron therapy alone is common in the severely anaemic.

We thank the medical superintendent and staff of the General Hospital, Kuala Lumpur, for their help in treating this patient.

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