It is almost always unilateral to begin with, becoming bilateral sooner or later. Almost all cases have a polycythaemia (Saint, personal communication). An anaemia was first seen in both my cases. The only two points which Buerger's disease has in common with these cases are that the patients were relatively young adults and were all males.

Ergot poisoning has to be considered. There is usually a history of the patient's having taken the drug, or of other cases occurring in the community. In the cases recorded, however, no other sufferers with gangrene were observed in the areas from which they came. In ergot poisoning, in addition to the gangrene, nervous symptoms may appear. In my cases, however, there were no neurological changes. In ergotism the gangrene may affect not only the toes but also the fingers, and is usually delayed for weeks. In my cases the onset was rapid and only the lower extremities were affected.

Exposure to excessive cold may result in gangrenous changes in the extremities. Abramson *et al.* (1946) describe illustrative cases with symmetrical gangrene of the toes and feet bearing a close similarity to the cases described in this paper. Trench foot is usually seen in those compelled to remain in trenches for a prolonged period during which the extremities are exposed to a damp and very cold environment. There was nothing, however, in the history of the present cases to attribute the gangrene to such a cause.

Lewis (1936) describes two interesting forms of symmetrical or bilateral gangrene which bear a great similarity to my cases. The first form is referred to as "bilateral gangrene of the digits in the young," and the second as "bilateral gangrene in the digits occurring in the elderly."

In the former group children and young adults are affected, both sexes equally. The origin of the condition is obscure. It usually affects relatively young people with no previous history of vascular disease. At the time of onset, however, malnutrition or some other condition causing chronic ill-health is present. It may, on the other hand, develop during an acute infection such as pneumonia or typhoid fever. The onset is apparently sudden, without warning, and several fingers or toes are affected. These become discoloured within a few days. Tissue at the tips of the toes is lost, the gangrene usually being dry. Occasionally it may extend to the base of the distal or middle phalanx. The disease is bilateral and often strictly symmetrical. The main arteries are unobstructed. Lewis considers that the condition probably results from damage to the intimal coats of the digital arteries, with resultant thrombosis. My cases appear to differ from these in that they had a preceding history of pain and oedema in the affected areas, and that in two of them the gangrene extended well beyond the toes, thus being more extensive than in the disorder described by Lewis; also, the fingers were unaffected. The similarity between his cases and mine lies in the fact that a single attack with symmetrical distribution occurred in those generally poorly nourished or in a patient during the course of or following an acute condition.

In the second group described by Lewis—bilateral gangrene of the digits in the elderly—an associated disease, such as cancer, tuberculosis, high blood pressure, or diabetes was present with the gangrenous disorder. The fingers often become discoloured without warning and gangrene soon follows. The gangrene is often associated with much pain. Lewis supposes that the vessels show intimal thickening, due to nutritional changes. This leads to multiple arterial obstruction.

It is not possible to give a cause for the cases I saw over the past four years. The exact symmetry of the affection would suggest a toxic disturbance or some general disorder

such as a deficiency disorder. I doubt if ergot was the cause of the gangrene, since one of the cases was admitted with cerebral malaria, and developed the condition in hospital. Quinine, however, was administered to this patient and may have produced a spasm of the vessels.

Pellagra, ariboflavinosis, hypoproteinaemia, and other disorders of nutrition are common in the African. Case 1 showed signs of pellagra. It is possible that the gangrene may have resulted from vascular occlusion, a direct result of a nutritional disturbance in the vessel wall. This possibility is not altogether improbable in view of the reports on the development of gangrene in the extremities seen among prisoners of war in the Far East. Recently Page (1946) reported on the findings on 2,000 prisoners of war from Hong Kong. Among these a certain number with painful feet and signs of deficiency in the vitamin B complex developed gangrenous changes in the toes and feet. Page reports, too, that Prof. Kinoshita of Osaka University studied these vascular changes seen among Japanese soldiers returned from the South Pacific and found definite thickening of the vessel walls with narrowing or obliteration of the tissues of the small arteries of the feet and legs.

Summary

Six cases of gangrene of symmetrical distribution and extent occurring in the African are described. In four the gangrene was limited to the toes, but in two the gangrene was more extensive.

The condition sets in simultaneously on each side, first with oedema, followed by pain and finally gangrene.

My thanks are due to Prof. C. F. M. Saint for kindly examining the two cases described in detail and for his suggestions as to the differential diagnosis. I am grateful to Dr. R. M. Morris, Medical Director, Southern Rhodesia, for permission to publish this paper.

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Medical Memoranda

Acute Infectious Lymphocytosis

Steigman's (1946) account of infectious lymphocytosis has drawn attention to the importance of this condition in children, especially in the differential diagnosis of infectious lymphocytosis and acute leukaemia, and prompts me to report a case of the acute form, as very few have so far been recorded in this country. From a perusal of the literature infectious lymphocytosis would appear to be a disease of recent origin, though before Carl Smith recognized it as a separate disease entity in 1941 it was probably confused with infectious mononucleosis. No cases even suggestive of the condition seem to have been reported before 1939, and, indeed, only a handful of cases were to be found in the American literature, and apparently very few elsewhere, until Finucane and Philips (1944) described an epidemic of 21 cases in a children's sanatorium.

CASE REPORT

The patient, a boy aged 7, first attended the children's department of the London Hospital on Oct. 15, 1946, with a history of diarrhoea for five weeks. There was slight abdominal pain, he passed frequent motions containing a little mucus, and he complained of sweating at night. The only abnormality noted was moderate enlargement of the left cervical glands. Rectal swab and x-ray examination of the chest were negative. On Oct. 25 blood examination revealed a white cell count of 30,600 per c.mm. (75% normal small lymphocytes) and haemoglobin 85%. At the age of 4 he had had whooping-cough and two years later he developed mumps. An uncle had died of pulmonary tuberculosis when the boy was 1 year old, but there was no history of contact.

On admission for further investigation the boy felt perfectly well, the diarrhoea having ceased. He was thin and rather pale, and was afebrile; pulse 90. The tonsils were slightly enlarged, as were the glands of the left side of the neck, which were discrete and rubbery. The spleen and liver were not palpable. There were no symptoms or signs referable to the nervous system. No other abnormality was noted, except that on Nov. 7 the white cell count was 52,300 (76.5% small lymphocytes). The Wassermann reaction, Mantoux test, and Paul-Bunnell reaction were all negative.

By Nov. 20 the white cell count had dropped to 11,100 (51% small lymphocytes, 40% neutrophil polymorphs, and 3% eosinophils). He was then discharged to the out-patient department, and on Nov. 26 the white cells numbered 13,300 per c.mm. (lymphocytes 25%). He felt well and there were no abnormal signs.

COMMENT

This case is typical of infectious lymphocytosis, especially in the mild abdominal symptoms, the paucity of physical signs, the cervical adenitis, the leucocytosis with relative and absolute lymphocytosis due to increase in normal small lymphocytes, lasting three to five weeks, and the negative heterophile agglutination test. If the disease is due to a virus, as is to be supposed in the absence of a demonstrable bacterial agent, the blood changes are very unusual, since viral infections are characterized by leucopenia, the apparent lymphocytosis being only relative. As in the cases reported by Finucane and Philips a mild eosinophilia appeared as the total count fell.

I should like to thank Dr. Kenneth Tallerman for permission to report this case, which was under his care.

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Pseudo-Hypertrophic Muscular Dystrophy

The commonest type of muscular dystrophy seen in clinical practice is pseudo-hypertrophic muscular dystrophy, and its features are fairly constant. The following case is of interest because of the late onset of symptoms and the slow progress of the disease.

CASE REPORT

The patient, a man aged 68, was admitted to hospital complaining of difficulty in walking. At the time of admission he could walk only with the greatest difficulty, and the slightest obstruction to his progress caused him to lose his balance. The first symptoms appeared at the age of 28, when he experienced difficulty in climbing stairs. He was then employed as a locomotive fitter, an occupation involving a considerable amount of climbing on and off engines. The progress of the disease was so slow that he was able to continue at his employment until he retired at the age of 64.

Since his retirement, however, a rapid deterioration in his condition has taken place, until now, at the age of 68, he is almost completely crippled. He is an only son, but a maternal uncle had been similarly affected since childhood. The patient has two sons, aged 28 and 30, who so far show no signs of the disease.

Examination revealed the characteristic combination of muscular hypertrophy and wasting found in this condition. Pseudo-hypertrophy was present in the gastrocnemius, deltoid, and infraspinatus muscles. Wasting was evident in the supraspinatus, pectoralis major, and biceps brachii, but there was no involvement of the masseter or of any of the other facial muscles. The pupils were central, circular, and equal, and reacted to light and accommodation. The cranial nerves were normal; the knee-jerks could not be elicited, but the ankle reflexes were present; and the plantar responses were flexor. There were no signs of disease in the cardiovascular, respiratory, or alimentary system. The Wassermann reaction was negative, and a glucose-tolerance test normal. Section of the pectoralis major showed an almost complete absence of muscle fibres with replacement by fat. Section of the gastrocnemius revealed swelling of the muscle fibres with proliferation of the sarcolemmal nuclei.

COMMENT

Pseudo-hypertrophic muscular dystrophy is said to have the least benign course of all the dystrophies, and generally shows a progressive deterioration. Death usually ensues in 10 to 15 years from secondary pulmonary complications following paralysis of the respiratory muscles. Most cases of this type of dystrophy start about the middle of the first decade. A precocious onset of symptoms is said to forebode a bad prognosis

with a rapid deterioration, and, conversely, a late onset often indicates a more favourable course. In the present case the onset was delayed until the age of 28, and the course of the disease has so far extended over 40 years. Moreover, there seems to have been an arrest of progress during 36 years.

It is likely that, had the patient been seen 10 years ago, recovery might have been reported, and this is a possible explanation of some of the cases of cure which have been recorded in the literature. The rapid progress of the disease at the end is also an interesting feature of the case.

Most of the cases in which arrest of the disease has taken place have been examples of the Landouzy-Déjerine type or of the Erb juvenile type. Since the essential pathology of the dystrophies is the same, it is to be expected that a similar course would be followed by other types of dystrophy, and the case here described is a good example of the slow course and temporary arrest seen in the other types of muscular dystrophy.

I wish to thank Dr. H. H. MacWilliam, medical superintendent of Walton Hospital, for permission to publish this case.

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Empyema of Frontal Sinus simulating Osteomyelitis

In the following case the history and clinical signs resembled osteomyelitis of the frontal bone, and for that reason I submit it for publication.

CASE REPORT

Madame A, aged 50, was admitted to hospital complaining of a discharging sinus above the right eyelid for five months. There was no pain and the discharge was preceded by a swelling of the right upper lid for two weeks. She had had headaches over the right side of the forehead for one year. Six years previously she had had similar headaches and swelling of the right upper lid, but no discharge.

On examination a narrow sinus discharging yellow pus was observed immediately beneath the centre of the right eyebrow. *Staphylococcus aureus* was found on direct examination and culture. A probe was passed easily through the sinus, which proceeded above the superior orbital rim in the direction of the posterior ethmoidal cells for a distance of 2 in. (5 cm.) over the right frontal surface of the frontal bone. There was slight depression, oedema, and tenderness on pressure. Skiagrams showed what appeared to be an abnormally large right frontal sinus; the left frontal sinus was apparently absent. The right superior orbital margin was depressed about one-third of an inch (0.8 cm.), and marked widening and shortening of the right superior orbital fissure were found. There appeared to be a doubtful sequestrum at the medial margin of the sinus. A lateral view showed an abnormal depth to the sinus.

The frontal bone was approached through a Howarth incision opening the discharging sinus. The orbital rim and floor of the frontal sinus were intact but very thin. The pus was evacuated through the discharging sinus, and an empyema of the right frontal sinus was found occupying an oval cavity about $3\frac{1}{2} \times 2 \times 2$ in. ($8.75 \times 5 \times 5$ cm.), which had completely eroded the roof of the orbit to the level of the superior orbital fissure. The pulsation of the frontal lobe of the brain and meninges was clearly palpable through the mucous lining of the empyema. There was an erosion of the anterior wall of the sinus, and through this the sinus discharged.

The fronto-nasal duct was enlarged in routine Howarth fashion and the anterior ethmoidal cells were removed. A 1/2-in. (1.25-cm.) drainage-tube was inserted into the wound through the enlarged fronto-nasal duct to the nostril. A full course of sulphathiazole and 3,000,000 units of penicillin were given over a period of a week. Recovery was uneventful.

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At the Eighth Congress of Scientific Films held in Paris in October, 1946, the Institut de Cinématographie Scientifique, Paris, and the Scientific Film Association, London, and observers from UNESCO, Czechoslovakia, Poland, Sweden, and the U.S.A., agreed that it was necessary to establish an international scientific film association. After preparing a draft constitution, the British and French organizations have been meeting in Paris to complete arrangements for an inaugural congress, to which all countries are being invited. This will be held in Paris at the beginning of October, 1947. It is hoped that the proposed association will assist in the provision of a number of practical and urgently needed services.