The most pleasing observation in these cases has been the spontaneous return of normal respiration within a few minutes of cessation of the drip, although the peritoneum has been perfectly relaxed for closure. The average time taken for the return of respiratory movements in these cases has been one and a half minutes, with a further period of two and a half minutes before full normal intercostal breathing returned. The figures showed considerable individual variation, but the impression was formed that in those cases which took longer than usual to start respiratory movements the return of normal respiration was quicker. No doubt the dosage of thiopentone, pethidine, and succinylcholine, and the degree of ventilation of the lungs, all influenced these figures, but the relative importance of each of these factors in prolonging apnoea is difficult to assess.

Summary

A technique for anaesthesia in abdominal surgery is described, using thiopentone, succinylcholine by continuous drip, intermittent pethidine, and controlled respiration with nitrous oxide and oxygen.

The succinylcholine drip gives a flexibility of control not obtainable with other relaxants, while respiration is quickly restored after the drip has been stopped. No case of prolonged apnoea has been met with. Given a well-trained nurse, the method is no more cumbersome than repeated injections of D-tubocurarine or other relaxant, even for the single-handed anaesthetist.

The technique is suitable for both planned and emergency abdominal surgery, in both fit and seriously ill patients.

The use of pethidine minimizes reflex disturbances and adds greatly to the post-operative well-being of the patient.

Thanks are due to our surgical and theatre nursing staff colleagues at Rush Green and Wanstead Hospitals, and particularly to our resident anaesthetists Dr. M. O'Callaghan, Dr. Pramanik, and Dr. W. R. Lamb.

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The Alcoholic Research Foundation, Toronto, was set up to conduct and promote research in alcoholism and the treatment and rehabilitation of alcoholics. Its annual report for 1952 gives an account of treatment methods and problems. In dealing with alcoholism of psychological origin the Foundation advocates informal group sessions under the direction of a psychiatrist and consisting in the exchange of experiences, attitudes, and knowledge by the participants. Many patients make real progress from this method. Others have been helped more by short interviews of 5–10 minutes. "Antabuse" continues to be used, although many who might be helped by it are dissuaded from taking it through previous misinformation. In employing antabuse no use has been made of the trial reaction with alcohol after the patient has been on the drug for a few days; it is considered unnecessary to use this test now that clear information is available to the patient. According to the report, there is room for more careful screening and instruction of patients on the use of antabuse if it is to give the maximum benefit. One problem causing concern is the increasing use of sedatives of the open chain ureide group, to which patients often become habituated.

AN UNUSUAL CASE OF SYPHILITIC PARKINSONISM

BY

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Although the recent literature on syphilis as a cause of Parkinson's syndrome is scant, it is an accepted fact that *Treponema pallidum* can cause the features of this condition (Guillain, 1935; Kinnier Wilson, 1940). The signs of involvement of the basal ganglia may appear soon after the original infection or may be delayed for some years. Pires (1935) reports the case of a man aged 32 who had a primary chancre five years previously, and three months after finishing a course of arsenic and bismuth injections developed rigidity in the right arm, pill-rolling movements of the fingers, and loss of facial expression.

Cases of Parkinson's syndrome combined with tabes dorsalis or general paralysis have also been recorded (Chavany and Levy, 1926; Dumas *et al.*, 1928; Urechia and Retezeanu, 1936b).

Urechia and Retezeanu (1936a) describe the case of a young woman, aged 24, whose first symptoms were uselessness of the hand for five minutes after she got out of bed in the mornings. She developed a typical Parkinsonian facies later on. This case was of particular interest in that the blood Wassermann reaction was negative but the cerebrospinal fluid Wassermann reaction was positive.

Cases of oculogyric crises, in association with other Parkinsonian features due to *T. pallidum*, are recorded by Pearson (1927) and Cossa *et al.* (1936).

The following case of syphilitic Parkinsonism seen at this hospital is of particular interest in that the patient, aged 43, appears to be a congenital syphilitic. The Parkinsonian features were well marked and were progressing. A survey of the literature failed to reveal a similar case.

Case Record

A professional fur classer aged 43 had not felt really fit since the removal of a papilloma of the bladder two years previously. Soon after discharge from hospital he began to feel tired in the daytime. During the past six months there had also been a great decrease in his usual energy and he had become rather depressed. Shortly before admission he noticed that his hands were shaking (especially the right) and he had difficulty in writing properly. The writing had become small and the letters were poorly formed. About this time his speech had become thick and slurred. There had been a tendency to fall over, particularly when he went out at night or closed his eyes. He had noted that his method of walking had become shuffling and that his arms had ceased to swing. At times he had difficulty in stopping once he had started walking. Dribbling of saliva was often excessive, particularly at night-time.

For the past two years he had had very severe pain in his right lower leg. He described it as "like a hot knife being pushed through the leg." The pain was always transversely through the leg, never vertically. It nearly always came on when he was in bed at night.

Previous Complaints and Illnesses.—As a baby he was said to have had a troublesome nasal discharge. The two upper permanent central incisor teeth were said to have been peculiar, in that they were shorter than the others and decayed early. He had a severe infection of the eyes at the

age of 18, and was almost blind for four months. He attended a London eye hospital and received a course of twenty-eight intramuscular injections. There had been no recurrence. The old hospital notes of his own doctor said that he had interstitial keratitis. He denied ever having had sexual intercourse with anyone but his wife, and there was no history of a chancre, skin rash, or other syphilitic manifestation.

Unfortunately, no satisfactory history of his parents was available. His wife and his son, aged 18, are well. Their blood Wassermann and Kahn reactions are negative. On admission he complained of tiredness, especially during the day, but inability to sleep and restlessness at night, dribbling of saliva, trembling of the hands (particularly the right), difficulty in walking properly, and a tendency to fall over.

On examination he was seen to have a typical mask-like, expressionless Parkinsonian facies. Speech was slow and slurred, and saliva dribbled from the corners of his mouth. He had a slight stoop and a shuffling gait, and did not swing his arms.

Nervous System.—Cranial nerves: the following abnormalities were noted. He had slight diplopia at times. The pupils, which did not react to light and reacted minimally to accommodation, were large, irregular, and unequal. The edge of the iris was hazy and irregular. There was slight lateral nystagmus, with a fine tremor of the closed eyelids. A fine tremor of the jaw was present. Ophthalmoscopic examination showed slight pallor of the temporal sides of the disks. The vision and fields were normal.

Limbs.—Power and co-ordination were normal, but there was slight bilateral rigidity, and a fine pill-rolling movement was present in both hands, particularly the right. Although there was no loss of power in the lower limbs, a marked degree of ataxia was present. This was particularly evident when he attempted to slide the right heel down the anterior surface of the left tibia. The reflexes in the arms were all excessively brisk. The knee-jerks were exaggerated, particularly the left. The ankle-jerks were present but not exaggerated. The left plantar response was flexor and the right extensor. The abdominal reflexes were normal. The sensations of touch, temperature, pain, and vibration sense were normal in the arms and legs. Position sense in the arms and left leg was normal, but in the right great toe it was grossly impaired. A marked degree of Rombergism was present. No abnormalities were found in the sphincters. Testicular sensation was normal and there were no areas of cutaneous anaesthesia of the face, forehead, or chest.

The cardiovascular system was normal. The blood pressure was 140/90. The respiratory, genito-urinary, alimentary, and lymphatic systems were normal. The chest x-ray film showed nothing abnormal.

Laboratory Investigations.—Blood: haemoglobin, 102% (15.1 g. per 100 ml.), E.S.R., 2 mm. in one hour (Westergren); white cells, 5,700 (normal distribution); Wassermann reaction and Kahn test, strongly positive. Cerebrospinal fluid: appearance clear (pressure 140 mm.); protein, 110 mg. per 100 ml.; globulin, excess present; chlorides, 700 mg. per 100 ml.; sugar, 65 mg. per 100 ml.; leucocytes, total 16 per c.mm.; lymphocytes, 100%; Gram stain, no organisms; culture, no growth; Lange, 5554320000; Wassermann reaction, strongly positive. X-ray films of the skull, right and left tibiae, knees, hands, wrists, and chest were normal.

Treatment.—The patient was given a course of 10,000,000 units of penicillin, 30,000 units of soluble penicillin three-hourly for 48 hours, followed by 600,000 units of procaine penicillin daily. Within a few days of starting the penicillin an obvious improvement in his general condition was noted. After receiving the full course he was discharged.

When examined one month later he no longer felt sleepy during the day, and at night he had eight hours of undisturbed sleep. He felt more energetic than before treatment,

and no longer dribbled saliva. There was only slight residual trembling in his hands, and he could write reasonably well again. He was able to stand with his eyes shut without feeling unsteady and could go out at night without fear of falling over. He has had no further diplopia. There have been no further lightning pains. His facial expression, however, was still somewhat mask-like, he still walked with a shuffling gait, and his arms moved only a little. There was, however, a considerable improvement compared with his condition before treatment started.

Discussion

This patient had typical Parkinsonian signs, a mask-like face, slow monotonous speech, tremor of the closed eyelids, rigidity and tremor of the arms, and a characteristic gait, but there were several unusual features. Irregular pupils with no reaction to light and a poor contraction on accommodation may occur in Parkinsonism, particularly the post-encephalitic type, but exaggerated tendon-jerks and extensor plantar response, impairment of position sense in the right big toe, a positive Romberg sign, and lightning pains in the legs are not part of the clinical picture of the disease. The past history of interstitial keratitis suggested the possibility of congenital syphilis, and the presence of syphilitic involvement of the nervous system was confirmed by the excess of lymphocytes and the raised protein content in the cerebrospinal fluid, the first-zone Lange curve, and the positive Wassermann reaction in the blood and cerebrospinal fluid.

Neurosyphilis and Parkinson's disease are both fairly common disorders, and the association of the two conditions in the same patient may at times be coincidental (Schaeffer and Bize, 1935; Kinnier Wilson, 1940). In this patient, however, the improvement in the Parkinsonian features following treatment with penicillin suggests strongly that the syphilitic infection of the nervous system was the cause of the Parkinsonian syndrome as well as of the other neurological signs. The syphilitic infection was in all probability congenital, and the development of neurological involvement occurred at an unusually late age. It is possible that the course of treatment which was given at the age of 18, when he had interstitial keratitis, though inadequate to control the infection completely, was enough to delay the appearance of neurological involvement.

There is little doubt that acquired syphilis can occasionally cause a Parkinsonian syndrome. Stevenson and Allen (1937) record a case resembling the present one, but with the addition of considerable mental deterioration, in which post-mortem examination showed typical changes of dementia paralytica in the cortex, together with widespread lesions in the corpus striatum and its connexions. Mella and Katz (1924) also record typical mesodermal syphilitic involvement of the basal ganglia. Their case was that of a man aged 46 who was admitted to hospital with a diagnosis of "paralysis agitans." He gave a history of a chancre ten years previously. His blood Wassermann reaction was positive. The cerebrospinal fluid Wassermann reaction was negative. No other tests were done. He died in hospital with bronchopneumonia. At the post-mortem examination two types of microscopical lesions were found: a perivascular infiltration of round cells and rod cells in the globus pallidus, and nerve-cell degeneration. The first is indicative of neurosyphilis, and this was further borne out by the gross findings of chronic leptomeningitis, atrophy of frontal convolutions, and granulations in the fourth ventricle which are pathognomonic of neurosyphilis. Although Mella and Katz suggest that the neurone changes may be secondary to vascular changes, they point out that the neurone change may be a primary one like that found in pre-senile paralysis agitans, and that two pathological processes are going on at the same time without any definite association.

Cases of a Parkinsonian syndrome occurring in the thirties and forties without a previous history of lethargic encephalitis are not uncommon, and the possibility of syphilis as the cause should be considered, especially if there

are unusual neurological signs such as were found in the present case; in this event, adequate antisyphilitic treatment may help in averting further progress of the disease and bring clinical improvement.

Summary

A case of the Parkinsonian syndrome apparently due to congenital syphilis is described. The response to treatment has been satisfactory.

Although syphilis is a rare cause of the condition it should be considered when the Parkinsonian syndrome develops in the 30–50 age group, particularly if there are any anomalous clinical features.

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Medical Memoranda

Fatal Suppurative Cholangitis without Obstruction

Acute suppurative cholangitis is almost unknown, save in the presence of chronic biliary obstruction or of intrinsic disease of the bile ducts. Rogers (1903) found gall-stone obstruction in 18 out of 20 cases. The following case is recorded because of the occurrence of fatal suppurative cholangitis in the absence of recognized obstruction or of antecedent jaundice.

CASE REPORT

A housewife, aged 65, previously in good health, noticed slight, painless distension of the upper abdomen in July, 1952. This was accompanied by some flatulence but no other dyspeptic symptoms. Three weeks later she had sudden violent abdominal pain while out walking. The pain was in the epigastrium and right hypochondrium, and was of such severity that she went straight home to bed. Antacids, hot water, and local heat all failed to relieve it, and it was aggravated by lying on her left side. The next day she felt feverish, anorexic, and nauseated, and sweated profusely. No rigors were described. Her urine became darker than normal, but the colour of the stool was unchanged. Her doctor then found she was pyrexial, and very tender to palpation, with "guarding" over the whole upper abdomen. The pain persisted, constant in intensity, without remission. Four days after the onset two attacks of vomiting occurred, and on examination a tender hepatomegaly and persistent pyrexia were found. She was not jaundiced. The next day she was admitted to hospital.

On examination she was drowsy but conscious, in obvious pain, and moderately dehydrated. Fœtor hepaticus was present. She lay on her right side with her knees flexed. She was not jaundiced. A few cutaneous petechiae were present, together with several De Morgan spots. The cardiovascular system was normal. The blood pressure was 130/80, but ocular fundi showed grade 2 hypertensive retinopathy. The liver was enlarged to 7 cm. below the

right costal margin; it was exquisitely tender, and had increased in firmness; its margin was difficult to define. Gall-bladder enlargement was not present. Splenomegaly and ascites were not present, and rectal examination was negative. The urine gave a positive reaction for bile constituents.

Investigations.—Blood: Hb, 102% Haldane (15.1 g.); white cells, 12,700 per c.mm., with 92% polymorphonuclear leucocytes, showing a "shift to the left"; serum van den Bergh, direct reaction positive; serum bilirubin 1.3 mg. per 100 ml.; alkaline phosphatase, 20.5 units per 100 ml.; thymol turbidity, 2 units; serum proteins, total 4.75 g. (albumin 2.8 g., globulin 1.95 g.); blood urea, 440 mg. per 100 ml. Urine: bile salts and urobilinogen present; albumin, 70 mg. per 100 ml.; large numbers of erythrocytes and pus cells present; culture yielded a heavy growth of *Bact. coli*. Stool: benzidine test strongly positive. A hepatic puncture biopsy, subsequently taken with a Terry biopsy needle, showed the characteristic changes of acute suppurative cholangitis.

No pyrexia occurred while under observation. A diagnosis of acute hepatitis with cholaemia and uraemia was made. Treatment consisted of intravenous administration of dextrose, saline, and water, later followed by Latner's intravenous regime for acute hepatic failure.

Five days after admission the patient's general condition showed further deterioration, with the development of drowsiness, disorientation, and minimal icterus. The skin of the abdominal wall and upper arms showed dusky purpuric blotches. Menaphthone (vitamin K₁), 10 mg., was given intramuscularly preparatory to hepatic puncture biopsy. A few hours later she collapsed and died.

At necropsy, 18 hours later, the lungs showed early pulmonary oedema. No bronchopneumonia or abscess formation was present. Many subpleural ecchymoses were present over both lungs. The cardiovascular system showed no abnormality beyond mild atheroma. The brain and meninges were normal. The oesophagus, stomach, and rest of the intestines were normal, except for a few diverticula of the sigmoid colon; these were not inflamed. There was no inflammation of the appendix or inflammatory lesion of the rectum. A fairly large blood-stained ascitic effusion was present. A large blood clot (approximately 300 ml.) was present in the peritoneal cavity in the region of the hepatic flexure and right lobe of the liver. The liver was large (2,720 g.). Three small puncture marks were present in the right lobe, but no tearing. A cut surface of the liver showed numerous small abscesses, containing yellow or occasionally greenish-coloured pus. Abscess walls showed recent inflammatory tissue. The gall-bladder was distended and thin-walled, and contained bile and several small and medium-sized black gall-stones. The bile was slightly turbid but not frankly purulent. The common bile duct was patent and appeared normal. Culture of the gall-bladder bile yielded a profuse growth of pure *Bact. coli*. The appendix and rectum were normal. The pancreas, kidneys, and urinary tract showed no abnormality.

The haemorrhagic ascites was attributed to bleeding from the site of the hepatic puncture biopsy—a matter of some interest in view of the frequency with which this investigation is nowadays carried out.

COMMENT

I have been unable to trace a necropsy-proved case of non-obstructive acute suppurative cholangitis, save in the presence of artificial regurgitation of chyme, as a post-operative phenomenon—for example, in cholecystgastrostomy (Zaslow and Counseller, 1946; Cole, 1947). A single case was described by Bassler (1937) in which no obstruction was discovered during laparotomy with exploration of the bile duct: this patient recovered.

On the other hand, chronic infective cholangitis without clinically recognizable jaundice and biliary obstruction is well known. It takes a remittent course without suppuration, and may be but one manifestation of an underlying "cholangitis