

a pungent smell and which does not produce an opalescent solution when poured into water. However, accurate information covering the use of potent bactericides could be given to barbers during their period of instruction at the trade school. Much confusion exists in the lay mind regarding the multiplication of bacteria on the surface of inanimate objects, and it is doubtful if any significant increase in numbers takes place on many surfaces. With metals of known toxicity, the number of viable cells may actually decrease. Immersing an infected instrument in a solution having feeble bacteriostatic activity cannot prevent the spread of infection, and, since staphylococcal skin sepsis is common, it seems not unreasonable to ensure that active bactericides are used by barbers to prevent further spread of infection within the community.

Summary

A bacteriological survey of 197 barbers' shops is described, and the incidence of infection with *Staph. pyogenes* is recorded.

The degree of contamination amongst individual instruments is noted, together with the antibiotic sensitivity and bacteriophage type of the strains isolated.

Attention is drawn to the relatively feeble activity of the antiseptic solutions commonly in use, and recommendations are made for the use of potent bactericides to reduce the dissemination of pathogenic staphylococci.

We are indebted to Dr. Philip Woodruff, Director-General of Public Health, whose interest and co-operation made this investigation possible. Our thanks are also due to Mr. J. A. MacDonald for the preparation of the Figure.

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DIABETIC AMYOTROPHY

IMPORTANCE OF GOOD DIABETIC CONTROL

BY

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Little has been written on the value of good diabetic control in the treatment of the complications of diabetes mellitus, although it is generally assumed that such control is necessary. In this paper three cases of diabetic amyotrophy are described showing the value of adequate control in this condition.

Bruns (1890) first described this condition in three cases of diabetes with pain in the hips and thighs followed by weakness and wasting in the leg muscles, without sensory impairment—all three patients improving on dietary control alone.

Garland and Taverner (1953) recognized this condition, which they called "diabetic amyotrophy," and as originally described it consisted of a progressive weakness and wasting of muscles accompanied by an aching or stabbing pain, usually limited to the muscles of the pelvic girdle and thigh, the quadriceps being most commonly affected. This wasting, characteristically asymmetrical in its distribution, was accompanied by loss of the tendon reflexes, extensor plantar responses, and an increased protein in the cerebrospinal fluid. There was no sensory impairment.

It was thought that the cause of the condition was probably to be found in the spinal cord, but since the original description an increasing number of patients have been seen with flexor plantar responses and electromyographic changes which suggest a peripheral lesion.

Three patients, two men and a woman, have recently been seen with this condition.

Case 1

A man aged 69 was admitted to hospital on January 24, 1961, with a history of increasing weakness in the lower limbs for six months, and nocturnal knife-like pains in the thighs and knees for five months. He was known to have had diabetes mellitus for the previous two and a half years, being treated with tolbutamide and diet.

On admission he was found to have diabetic retinopathy, gross wasting and weakness of both quadriceps and the

adductor groups of the thighs, and of both calves, the right more than the left. The knee- and ankle-jerks were absent on both sides, with flexor plantar responses. Vibration sensation was bilaterally impaired in the legs. Peripheral pulses were present. The blood sugar was: morning, 255 mg./100 ml.; evening, 230 mg./100 ml. Electromyography excluded the presence of a peripheral neuropathy.

A diagnosis of diabetic amyotrophy was made and he was treated with globin zinc insulin, being controlled with 24 units a day—blood sugar then being: morning 160 mg./100 ml.; evening 105 mg./100 ml.

The pain diminished over the succeeding month and the power in his legs steadily improved until by March 3 he could walk the length of the ward with the aid of sticks. He was readmitted on April 23—that is, three months after starting insulin—for reassessment, when it was found that the wasting in the affected muscles was much less and the power correspondingly greater; when seen two months later there had been further improvement.

Case 2

A woman aged 59 was admitted to hospital on April 15, 1961, with a history of increasing pain and weakness in the left thigh for six months, necessitating confinement to bed for the previous month. She was known to have had diabetes mellitus for three years, which had been treated with tolbutamide but without dietary restrictions.

On admission she was found to be overweight and to have considerable weakness and wasting of the quadriceps with minor degrees of weakness in the left hamstring and peroneal muscles. The knee-jerk on the left was absent although it was present on the right, and both ankle-jerks were elicited. There were bilateral flexor plantar responses, loss of vibration sensation in both legs, and good peripheral pulses. She had mild osteoarthritic changes in the knees, more pronounced on the left side. Blood sugar was: morning, 298 mg./100 ml.; evening, 318 mg./100 ml.

A diagnosis of diabetic amyotrophy was made although the osteoarthritic complicated the picture. She was treated initially with tolbutamide and a 1,000-calorie diet without success—blood sugar being: morning, 332 mg./100 ml.; evening, 225 mg./100 ml.—and was therefore put on globin

zinc insulin 14 units/day—blood sugar then being: morning, 190 mg./100 ml.; evening, 170 mg./100 ml.

The pain in the left thigh steadily diminished in intensity over the next few weeks, analgesics having a greater effect than they had prior to proper diabetic control. By October 3 she was able to walk short distances without the aid of sticks, and on examination there was some return of power in the quadriceps and the wasting had diminished. Six months after starting insulin she was free from pain, could manage in her home with the aid of sticks, and climbed 18 steps once a day. She was also able to lift her left leg off the bed quite easily.

Case 3

A man aged 70 was admitted to hospital on September 21, 1961, with a history of polydipsia and polyuria for six months, and tiredness and weakness and cramp-like pains in the right leg for six weeks.

He was found to have bilateral quadriceps wasting, especially on the right side; the knee-jerk was absent on the right and diminished on the left; ankle-jerks were present on both sides. Plantar responses were flexor, there was no sensory impairment, and peripheral pulses were present. Blood sugar was: morning, 240 mg./100 ml.; evening, 250 mg./100 ml.

A diagnosis of diabetic amyotrophy was made and he was treated with insulin zinc suspension 26 units/day, blood sugar then being: morning, 180 mg./100 ml.; evening, 230 mg./100 ml.

There was a slow but steady improvement in the right leg over the succeeding months; the pain went and he found that the leg was no longer giving way as he walked. There was a definite return of power in the quadriceps muscles, but after three months the right side was still noticeably weaker than the left and the right knee-jerk was still absent.

Discussion

Three cases of diabetic amyotrophy are described; in two there had been a steady decline in the condition, with increasing pain, weakness, and wasting in the affected muscles, while the diabetes had been inadequately controlled. After good control, however, there had been a noticeable improvement in all three patients.

The pattern of this improvement was that the patient first noticed a diminution in the intensity of the pain—having more restful nights and finding that the analgesics that hitherto had been ineffective now gave relief. This took from two to four weeks and was followed by a slow return of power in the affected muscles.

Goadby and Jacobs (1950) have shown that the neurological complications of diabetes have a higher incidence in poorly controlled cases than in the better-controlled groups, although they found no such trend with other complications. Therefore, as Garland (1955, 1961) suggests, it appears that complete diabetic control is necessary for the treatment of cases of amyotrophy; this means control by blood-sugar estimations, for, although the urine may remain sugar-free, the blood sugar may still be high.

Summary

Three cases of diabetic amyotrophy are described which show the value of complete diabetic control in the treatment of this condition.

I am indebted to Dr. K. Robson for permission to publish the results in Case 2; also to Dr. James Dow for permission to publish the results in Case 1 and for his help and encouragement.

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Special Article

THALIDOMIDE BABIES

MEMORANDUM FROM THE BRITISH PAEDIATRIC ASSOCIATION*

The number of babies damaged by thalidomide or suffering from the thalidomide syndrome in Great Britain is not yet known. Inquiries now being conducted will reveal the size of the affected population by the middle of September, 1962, after which date there should be no more thalidomide-induced cases. In the meantime doctors can help by reporting cases to the local medical officer of health, and by referring them to the local paediatrician, orthopaedic surgeon, or limb-fitting centre.

Most of the affected children survive with unimpaired intelligence. Everything should therefore be done from birth onward to diminish their disability and to secure for them the best and most useful lives possible. This will require the greatest co-operation between the parents and the various doctors, specialists, social workers, and teachers concerned. For this reason the British Paediatric Association, supported by the Chailey Heritage, the Shaftesbury Society, and the Invalid Children's Aid Association, feels that it is important to make this preliminary statement, drawing attention to the broad principles of management and treatment and to some of the pitfalls to be avoided.

Role of the Community

The problem is first and foremost a problem for the family, which has to meet the tragedy of the birth of a severely handicapped baby with courage and with the determination to secure for it the best possible future. The community, too, must play its part both in giving moral support and encouragement, and, where necessary, in the more practical ways of special medical, orthopaedic, educational, and financial help. Much will be contributed by the existing medical, social, and educational services, and from any parents' association to be formed. Assessment clinics will undoubtedly be needed. Their siting must await information about the number and the whereabouts of the affected babies. A central advisory body might well help to co-ordinate local plans. The details of such plans should be based on knowledge and experience of the requirements of severely handicapped babies and children, and of how they are met both in Great Britain and in other countries. Such babies and children are not new in our community, and a pool of experience is available at long-stay orthopaedic hospitals, and in the special schools of the voluntary societies. Congenital absence of limbs, spina bifida, and the effects of anterior poliomyelitis have always provided a challenge in the care and education of the very young. What is new is that a group born mainly in 1960, 1961, and 1962 share an absence or an inefficiency of both upper limbs and of grasp, and to a lesser extent deficiencies of both lower limbs, as the result of a known and man-made drug effect.

The group is expected to remain limited in numbers, but the lessons learned must prove of immense help in

*This memorandum was written by Dr. A. White Franklin at the request of the British Paediatric Association and is published with the approval of its *ad hoc* subcommittee on thalidomide.