latter there was impaired sensation up to the knees. His knee-jerks were absent. His progress has been very slow, and at the present time he is unable to sit up without support. There is foot-drop on both sides; some oedema of the feet. He is improving daily; the knee-jerks have returned. All his trunk and leg muscles react to faradism. Above the waist he has recovered completely.

Case 16 (Major Yates's case).—This patient is at present in a very similar condition to the preceding. He still has some nystagmus, right facial paresis. There is weakness in both arms, the left more than the right, but it does not prevent him from using them fairly well. He can walk by himself, but there is double foot-drop and a stepping gait. The knee jerks are still absent, and the muscles are generally flabby and wasted. The muscles below the knees do not respond to faradism, with the exception of the peronei in the right leg.

I do not propose to refer in detail to the results of a very large number of examinations of cerebro-spinal fluids, bloods, excreta, etc., which were made by my colleague Professor Douglas from these cases. But I should like to express my thanks for his valued help on the pathological side, and for his extensive investigations of various food-stuffs during the Botuline era.

CONCLUSIONS.

The points for discussion may be summed up as follows: Is this, or is it not, an epidemic of poliomyelitis? If it is not, then it may be either an entirely new disease, or one that until recent times has not been observed in epidemic form.

The clinical resemblances, such as there are, between these cases and poliomyelitis were recognized from the first. In my paper I called attention to the absence of cases of "localized limb paralysis commonly seen in acute poliomyelitis."

The clinical differences, however, have been so recently stated by Kinnier Wilson with such clearness that I need not do more than mention them. Lethargy and asthenia, so severe and prolonged in most of the cases of encephalitis, are not recorded as occurring in typical cases of poliomyelitis, either sporadic or epidemic.

I cannot think that any one would consider the term "sleeping sickness" descriptive of poliomyelitis in general and yet it would not be an inappropriate name for this epidemic. In fact, if one takes away the palsies from these cases of encephalitis, little remains which is common to them and to poliomyelitis. Even the palsies present striking differences in the two diseases in their mode of onset, situation, and results.

In poliomyelitis the onset tends to be rapid and maximal; the regions affected are usually those innervated from the spinal cord; the distribution often unilateral. They frequently leave permanent residual effects of greater or less extent in the area first attacked. In the recent epidemic, the paralyzes are typically of gradual ingravescent onset; they almost always affect regions innervated by cranial nerves, and are often bilateral. So far as our evidence goes at present, they usually leave no permanent residual effects in the area first affected.

We know that many nerve poisons, for example, diphtheria, *B. botulinus*, lead, alcohol, etc., show a peculiar predilection for certain particular parts of the nervous system. In these cases of epidemic encephalitis there seems to be such a definite selective action at work.

It has been said that the commonly held view of poliomyelitis as essentially a cord disease is based too much on sporadic cases, and that in its epidemic form it is characterized by the multififormity of sites affected. This line of argument rather accentuates the clinical difference between poliomyelitis and the cases in the recent epidemic. The latter were notable for the uniformity of the sites affected.

As regards the possibility of this being an old disease which has only recently been recorded in epidemic form I have no proofs to bring forward. We know that a similar epidemic appeared about the same time of year in 1917, as recorded by Economo in Vienna, and that Netter has recorded similar cases in Paris. Possibly, in the course of time, records of sporadic cases of a similar type may be found stowed away in the pigeon-holes of other disease—poliomyelitis, influenza, etc.—where they have been regarded as abnormal or exceptional varieties. Such a line of inquiry seems worth consideration. Not until these alternatives have been set aside can we speak of it as a new disease; and, in any case, the final decision must rest with the pathologist.

QUININE PROPHYLAXIS IN MALARIA.

BY

G. WAUGH SCOTT, M.B.,

ESTATES MEDICAL OFFICER, SUNGHEI SPUT, N., PERAK,
FEDERATED MALAY STATES.

THE importance of arriving at some definite conclusion as to the usefulness, or otherwise, of routine quinine giving as a preventive of malaria requires no emphasizing. The strictures of Dr. Treadgold, in the *BRITISH MEDICAL JOURNAL* of May 11th, 1918, are thoroughly deserved.

The opportunity of making controlled experiments on the subject must have occurred times innumerable, yet the whole literature of the subject provides hardly anything worth the name of statistics. The reason for this is, partly, the apathy which attacks Europeans in the tropics, and from which medical men are by no means immune. It is, however, much more largely to be accounted for by the preconceptions and prejudices of those in official positions who are able to impose their will over large areas; the effect is very often to inhibit useful research activity. It is one of the dangers that will have to be guarded against in the schemes now proposed to establish a national medical service.

The following experiment will be better understood if I give a short explanation of the two categories of rubber estate labour with which it deals.

Tappers are those coolies whose work consists in paring off the thin shaving of bark from the tree, and so starting the flow of latex from which rubber is produced. His day's work consists in carrying out this operation on from 300 to 400 trees each morning, and collecting the resultant latex in two buckets which he then carries to the factory. It is light work, and the tapper is usually finished for the day by noon, having begun from 5.30 to 6 a.m. Weeders are all the rest of the labour force; the name explains their chief duty, but they are used in many other ways, for road and drain making, pruning, attending to pests, diseases, etc. On the whole their work is harder, and their day is from 6 a.m. till 2 p.m. Among the weeders there is a much higher proportion of women and children, and elderly coolies, than amongst tappers, who are chiefly men from 15 to 40 years of age.

It will be noted that the tapping force is that on which the daily output directly depends, and its maintenance at full strength is one of the chief cares of the management. The experiment here recorded owed its inception to the anxiety of the manager to keep his tapping force up to strength.

It was decided to give each tapper 10 gr. of quinine each day at the factory. It was given when the man brought in his latex pails, so that the giving was rigorously performed. This was maintained for the whole of the year 1917, and during that same period no prophylactic quinine was issued to the weeding coolies.

The following figures give the result stated in percentage per month admissions to hospital:

	Tappers.	Weeders.
Average monthly labour force of each class	140.83	252.03
Average number of cases per month admitted to hospital for malaria	20.16 = 14.31% per month	33.25 = 13.19% per month.

When it is remembered that the tappers are of superior physique, better paid and have lighter work, it must be admitted that all the valuable quinine which has been swallowed by this large number of men during a whole year gave no protection whatsoever against malaria.

This report entirely relates to Indian Tamils, both tappers and weeders being of this race, and both living under identical conditions and in the same sets of buildings.

THE alliance between Columbia University and the Presbyterian Hospital, New York, which was made in 1911 with the object of forming a great medical centre in that city, has been dissolved. The university was unable to get the money needed for its share of the buildings and rejected the plans proposed as the condition of an endowment offered by the Rockefeller Foundation.