IMPROVEMENT IN FUTURE PROSPECTS.

But I think no secret will be revealed if I tell you that this state of things will probably soon be remedied. During the past year Mr. Arthur Cheate for otology and myself for laryngology and rhinology have brought the question before the Advanced Board of Medical Studies of the London University, and as a result of the sympathy and support of that Board I hope you will in the near future find that the Senate will permit these subjects to be taken as a part of the M.S. degree.

This should be a great help to us in securing the best type of specialists—i.e., men who have a thorough knowledge of general medicine and surgery, and minds capable of taking a wide view of the whole field of human suffering; we can expect little from those who, with a bare qualification to practise, at once commence to focus attention on some special department of the body. Such a course soon brings in its train a narrow and restricted outlook. Its exponents are of that type of specialist who treats a cough with some favourite cough mixture or local sedative without any search for a possible systemic cause of the symptom. With equal thoughtlessness he has no hesitation in applying the galvano-cautery to, or removing normal structures from, the nose of a young boy or girl who at ages from 14 to 16 may be suffering from a transient but nevertheless physiological congestion of nasal mucosa associated with other changes incidental to puberty. In fact, he endeavours to construct the pyramid of his knowledge with the small end for a foundation. If social or financial success is their goal such "specialists" may attain their reward, but they will not advance our knowledge in the subject. However, to those of us who are interested in otology its future should be full of good prospects, even though we feel at times as if we were struggling in a quagmire of administrative and lethargic incompetence.

In our favour is the outstanding fact that the ear and throat clinics of the United Kingdom are staffed by experts, while in nearly all our universities, if a student is attracted to the subject, he may elect to be examined in it for the highest degrees in medicine and surgery. Therefore it is up to the teachers to impress upon students the importance of a practical working knowledge of diseases of the ear, nose, and throat, and to urge on the medical committees of their hospitals that a minimum of three months be spent in the ear and throat department before an "attendance certificate" is granted allowing the student to enter for the final qualifying examination.

In the matter of post-graduate teaching the special hospitals as well as the medical schools can help. Let me express the hope that each member of this section will pull his weight in helping on any post-graduate scheme which may take shape in London. Many of our Overseas colleagues were much impressed by the efforts made on their behalf in 1918 and earlier in this year, and they look to us to establish a real, live post-graduate school or association in London, so that they are not driven, as heretofore, to Vienna, Berlin, Freiburg, or Paris.

Lastly, in connexion with the newly established Ministry of Health, I hope otologists will emphasise the importance of caring for the ears and throats of the nation's children—there should be scope here for the energies of many of our junior men.

With hard work as our key we can unlock all the secrets of otology, and by its influence miracles may be wrought to-day as astounding as those of old; for its efficacy should be no less potent in our hands than it was in those of Harvey, Hunter, Virchow, Pasteur, or Lister.

To-day it is the fashion to decry work, to limit its exercise by arbitrary restrictions of time and output, and to bring to a dead level all human enterprise and initiative. May such legislation never thwart the workers in the realms of medicine and surgery, for "to travel hopefully is better than to arrive, and the true success is to labour."

REMARKS ON THE
TREATMENT OF MALARIA IN ENGLAND.¹

By S. P. JAMES, M.D. LOND., D.P.H.,
LIEUTENANT-COLONEL, I.M.S. (RET.).

THE treatment of malaria is a subject upon which it is not easy to break new ground without raising controversial issues. In this paper I propose to remark briefly on some of the problems which at the present time confront medical practitioners almost daily in this country.

In the first place, it is well known that from March 1st this year the statutory duty has been placed on medical practitioners of notifying all cases in which a patient upon whom they are in professional attendance is suffering from malaria. There has been some difference of opinion among medical practitioners as to the interpretation to be placed on the word "suffering" in the Regulations, but since the order came into force, nearly 14,000 patients have been so notified, and it will be seen from the figures given in the following table that as yet the weekly number of notifications shows no sign of diminution.

*Notifications of Malaria in England and Wales,
1919.*

	Official notifications.	Additional cases reported by Ministry of Pensions since Oct. 4th, 1919.
March	598	—
April	838	—
May	1528	—
June	1415	—
July	2381	—
August	2259	—
September	1366	—
October	1172	405
November (3 weeks only)	918	1247

Cases of malaria are now distributed almost everywhere in England and Wales, and a thorough knowledge of the diagnosis and treatment of the disease is thus not a matter which can be left in the hands of a few specially qualified officers, but must be communicated as widely as possible to medical practitioners throughout the country. Considering the notified cases from the point of view of treatment, by far the most important are certain cases in which the treatment of an acute relapse has not been successful in preventing a fatal issue. The number of deaths registered as due to malaria is usually in this country between 50 and 60 per annum, but in 1917 the number rose

¹ Read at the opening of a discussion on the Treatment of Malaria at the Medical Society of London on Nov. 24th.

to 126, in 1918 to 197, and in the present year, if the rate of mortality now prevailing continues, the number will be 280. The following figures have been kindly supplied to me by Dr. Stevenson, Registrar-General:—

Deaths from Malaria by Years and Age-groups.

Year.	Death from malaria in England. (Males and Females.)			Age-groups of deaths from malaria during the first quarter of 1919.	
	M.	F.	Total.	Age-groups.	No. of deaths.
1910 ...	44	7	51	Up to 15	1
1911 ...	56	2	58	„ 20	17
1912 ...	49	9	58	„ 25	15
1913 ...	49	9	58	„ 30	9
1914 ...	56	4	60	„ 35	12
1915 ...	55	10	65	„ 40	7
1916 ...	59	3	62	„ 45	4
1917 ...	122	4	126	„ 50	—
1918 ...	188	9	197	„ 55	—
First 3 months of 1919..	70	0	—	„ 60	1
				Over 60	4
				—	70

It will be seen that a disquieting feature of the deaths in 1919 (and the same was true of the deaths in 1918) is that most of them were of young men. Another serious feature is that in at least some instances death might have been prevented if all medical practitioners in England had a sufficient knowledge of the diagnosis and treatment of the disease. I do not desire to labour this point, but I have been so impressed by the sad nature of some of the fatal cases that I take leave to record one of them as briefly as possible.

A soldier who had suffered from malaria in Egypt came home on leave to a populous district in England on July 22nd. On the 24th he had a slight febrile attack, but got up next morning. On the 29th he had to go to bed again with fever and great aching in the bones, but it was said that he had no definite rigor or sweating. A doctor who was called in diagnosed influenza and prescribed a mixture containing sodium salicylate. On August 2nd the temperature was still high and there was much vomiting. The salicylate mixture was repeated. On the 4th the eyes were jaundiced and the liver somewhat enlarged. Malaria was then suspected for the first time, and a mixture containing $2\frac{1}{2}$ gr. of quinine to the dose was prescribed, to be taken every four hours, but on account of the continuous vomiting it was doubtful if much could be retained. On the 7th the patient seemed better, but next day he was sullen, drowsy, and delirious, and passed porter-coloured urine. On the 9th both parotid glands became enlarged; on the 10th there was no fever, but jaundice had increased and the patient was only partly conscious; on the 11th he had a profuse sweating attack and died a few hours later. An examination of a film of peripheral blood taken after death showed numerous crescents and ring forms of the malignant tertian parasite.

I believe everyone will agree that in England a death directly due to malaria should be an exceedingly rare event. In this connexion I may remark that in the hope of preventing some avoidable deaths the Ministry of Health issued a note, published in the leading medical journals² last August, and that with a view to early inquiry into the deaths which may occur, it has since been arranged that registrars throughout the country shall send immediately to the Ministry a certified copy of the registration of a death attributed to malaria.

Perhaps the next most important cases among the notifications are cases of malaria contracted in England. The total number of such cases which have been discovered or notified since September 1917 now amounts to 414. Among the cases which have occurred in the civil population it is very interesting that the great majority (75 per cent.) have been children under 15 years of age.

Inadequate Quinine Treatment.

The point which I desire to emphasise with regard to these indigenous cases is also brought out in the above fatal case of exotic malaria—namely, the quite inadequate quinine treatment which some of these patients received even after a definite diagnosis of malaria had been made. For example, a boy, aged 15, was admitted into a hospital in England on Oct. 12th and was found to be a case of malaria (with benign tertian parasites) on the 15th. He was severely anæmic and had a greatly enlarged spleen. At a visit to the hospital on the 21st it was found that the doses of quinine which were being given were quite inadequate for the cure of the patient. Fortunately in this case a suggestion that the doses should be increased was readily accepted with the result that the patient soon recovered. The temperature charts of two indigenous cases under treatment in another hospital in England were also instructive. The patients were children, aged 7 and 8 years respectively, and the insufficiency of the doses of quinine given was obvious from the slow recoveries and the early recurrence of fever.

An interesting comparison with the above cases is afforded by the chart of a chronic malaria patient from Salonika who was receiving (as anti-relapse treatment) 10 grains of quinine daily. In the former case we know that the daily fever was due to insufficient quinine. The chart of the latter patient was handed to me as an example of what is called secondary or “quinine fever,” but on searching his peripheral blood thoroughly we were able to find malaria parasites; and when curative treatment was substituted for anti-relapse treatment the temperature fell quickly to normal and remained so. The fever, therefore, should have been described as “quinine-resisting fever” rather than as “quinine fever.”

This subject of inadequate quinine treatment is also of importance in connexion with the serious cases of malaria which occurred during the war in great numbers on ships returning home from Dakar, Sierra Leone, and other West African ports. On this subject I have not time to say more than to express regret that the recipe of the “quinine mixture” given in the latest edition of the “Ship Captain's Medical Guide” still contains only two grains of quinine to the dose.

Suggestions for Improved Treatment.

I have unfortunately left myself very little time in which to refer to the more usual cases represented in the notifications, but I believe that the treatment of such cases will be fully dealt with by other speakers. I hope that they will keep in mind that we are desirous of receiving any suggestions which will simplify or improve the rules of treatment given on pages 15 and 16 of the official pamphlet, “Suggestions for the Care of Malaria Patients,” which was issued to all medical practitioners early this year. Having in view that in present circumstances a practicable method of treatment must be a simple and inexpensive routine, I believe that no material change in those rules is necessary; but I am more than ever convinced that

the degree of success to be attained with any of the four methods of after-treatment mentioned in the pamphlet depends almost entirely on the administrative arrangements for ensuring that the routine is conscientiously followed. There are grave difficulties in connexion with that part of the problem, and until they are solved I doubt if we shall see a great diminution in the number of malarious patients in this country.

In the first place, although all demobilised soldiers suffering from malaria are entitled to receive treatment from an Insurance practitioner, it appears from recent inquiries that a great many men who still suffer from relapses have not applied to any medical practitioner for treatment since they were demobilised. The Ministry of Pensions have recently arranged to forward particulars of these cases (which presumably have not been notified) to the Ministry of Health, and the number of such reports which we receive each week now averages about 300.

Secondly, as regards the men who do place themselves under the care of a medical practitioner, there are great difficulties in exercising more than a small amount of supervision over their treatment, especially in country districts. Some of them are men who were gametocyte carriers when they were demobilised and still remain so. Some are men who think that they know much more than their physician about the best treatment for their particular case. Some are men whose illness is really a psychosis in which the patient continues to nurse a complaint the cure of which would deprive him of some benefits to which he is entitled while his disability lasts.

Malaria Contracted Locally.

As an unfortunate consequence of the neglect to continue systematic treatment after demobilisation some men have this year been the source from which members of their own family and visitors in their households have become infected with the disease. These occurrences show that arrangements for preventing the spread of malaria in this country are intimately connected with arrangements for ensuring the satisfactory treatment of demobilised soldiers. For this reason I welcome very heartily the recent institution by the Ministry of Pensions of a special malaria clinic through which, under the direction of Sir Ronald Ross, the systematic examination and treatment of pensioned soldiers in the London area is being undertaken. I suppose it is greatly to be regretted that it should be necessary to go to the expense of establishing such a clinic, but if it is the intention of the Ministry of Pensions to make similar arrangements in other parts of England, I would suggest that the next area selected should be one in which it would be possible to show that the establishment of the clinic had not only been the means of curing all the patients in the area, but had also, for that reason, been an effective means of preventing the occurrence of locally contracted cases.

DEATH OF MR. W. E. TAYLOR.—William Edmund Taylor, L.R.C.P., M.R.C.S., died suddenly at Hayle, Cornwall, on Nov. 11th, aged 30 years. The deceased was the son of Mr. E. J. Taylor, town clerk of Bristol. He received his medical education at Bristol, and after holding resident appointments at the Bristol General Hospital he received a temporary commission in the R.A.M.C. at the beginning of 1916. He was gassed and suffered from shell-shock whilst serving in France and was invalided out of the army in February, 1917. Later he joined Mr. A. D. Tenison, of Hayle, in partnership, and much sympathy is felt there for the widow and family.

THE PRESENT POSITION OF X RAYS AND RADIUM IN GYNÆCOLOGY.¹

BY DAWSON TURNER, M.D. EDIN., M.R.C.P. LOND.,
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IN CHARGE OF THE RADIUM TREATMENT AT THE ROYAL
INFIRMARY, EDINBURGH.

THE employment of radiation treatment in gynæcology dates from this century, the X rays were not discovered by Röntgen until 1896, and radium was not extracted by the Curies until 1898. Thus the treatment of disease by these methods is still in its infancy.

Production of the Radiation.

If the X rays are to be employed powerful apparatus is required, into the details of which I have not time to enter, except as regards the X ray tube. This may be a Coolidge tube or a water-cooled Müller with a diameter not less than 16 cm., and the rays emitted should have a penetration of 7-9 Bauer. Dr. Robert Knox has fitted a Coolidge tube to a rotating stand, so that a centrally situated tumour can be radiated from all aspects of the body; this has the great advantage that a large dose can be administered to subcutaneous tissues without an overdose to the skin. The X ray is of the same nature as a light wave, but it has a very short wave length.

If radium or mesothorium is to be used for most cases a suitable amount would be 100 milligrammes of pure radium bromide. Less or more than this can be used, the more radium the shorter the exposure. Dr. Howard Kelly uses a gramme to radiate the uterus through the abdominal wall. The radium at one's disposal should not be collected in one tube, but should be divided up into smaller amounts so as to distribute the radiation. For treatment of a case of cervical cancer one or two tubes could be placed in the cervical canal and the others around the os in the fornices. Tubes are more suitable for gynæcology than capsules. The salt is enclosed in a hermetically sealed glass tube surrounded by an aluminium tube again surrounded by a silver or platinum tube. In my own tubes the thickness of the aluminium varies from half a millimetre to a millimetre, and the silver from one to one and a half millimetres. If the tube be of platinum its thickness might be half a millimetre. It is better to use the solid salt where possible rather than the constantly decaying emanation. The solid salt being quite constant in its radiation, the dose can be accurately measured and the tubes need not be disturbed from their position.

Effects of the Radiations on Normal and Abnormal Tissues.

I shall not attempt to make any distinction here between the relative effects of X rays and of radium rays, but shall class them both together. A small dose produces stimulation, a larger one produces inflammation which may be followed where the dose has been stronger by degeneration, necrosis, and sloughing. The effect on the skin somewhat resembles that of a burn. There is infiltration of leucocytes with degeneration of the squamous cells leading to an atrophy, which includes the hair bulbs and sweat glands, but these changes do not begin, as in the case of a true burn, immediately upon

¹ The substance of a lecture for the Edinburgh Post-graduate Course in Medicine.