MEDICAL ARRANGEMENTS IN MALAYA DURING THE EMERGENCY 1948 - 49[1]

BY

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I BEGIN my lecture by giving a very brief description of Malaya and its inhabitants. The Malayan Peninsula extends from the Siamese border in the north to the island of Singapore in the south. Malaya is a little larger than England without Wales. Four-fifths of the country is covered in evergreen jungle.

The remaining one-fifth is occupied by plantations, tin mines, towns and villages. It is divided down the centre by parallel ranges of mountains which vary from 2,000 to 7,000 ft. in height. The East Coast is very attractive with great stretches of white sandy beaches and rocky headlands and covered at intervals by beautiful casuarina trees. The West Coast is largely muddy flats with mangrove swamp the haunt of mosquitoes and every biting insect. Inland on the West Coast there is a preponderance of Chinese attracted there by the tin deposits and the land suitable for growing rubber. The East Coast is largely inhabited by Malayans except in the sparsely scattered towns.

The West Coast is served by excellent roads including a first-class road running the whole length of the peninsula. The Railway on the West Coast is considered second to none in the Far East and is rapidly regaining its pre-war standard with first-class air-conditioned coaches and restaurant cars attached to all the express trains.

The Inhabitants.—The population of Malaya is roughly about 5½ millions, made up of Malays and Chinese in about equal number, but includes 30,000 Europeans (excluding the Army), 750,000 Indians, 20,000 Eurasians and also about 30,000 Aborigines generally known as Sakai, who inhabit the jungle and rarely emerge from it.

The Malays are a very attractive, humorous and peace-loving people, possibly somewhat indolent judging from European standards. Their main occupations are farming and fishing. They have their own Sultan in each State to whom they are extremely loyal. They have occupied Malaya for 5,000 years and are friendly to all foreigners, having no sense of inferiority.

The Chinese are a cheerful and exceedingly hard-working people, great shop-keepers, and in many ways the backbone of the business community. They are mostly Buddhists or followers of Confuscianism.

The Indians are mostly migrants from the Madras district and South India.

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The greater number are employed as labourers on the estates, but there is a small but powerful minority from Ceylon. They are good administrators and are highly influential.

The Eurasians are well established in Malaya and play an important part in the life of the country. They are mostly descended from the Portuguese and the Dutch.

Sakai.—This aboriginal race is physically well developed, small in stature, but well proportioned; very shy but friendly. They live entirely in the jungle and carry blow pipes which they use with great skill in procuring food.

Industry

Rubber and tin are the two main industries. Rubber was introduced to Malaya from Brazil. The seedlings were germinated at the Royal Botanical Gardens at Kew. In 1897 there were only 345 acres of rubber in Malaya and now there are more than 3 million acres planted with rubber trees.

Climate

The temperature is humid, rarely above 90° with a 10 to 20° drop at night. The country is famous for its variety of flowering trees and shrubs. Garden flowers are difficult to grow but well repay the time and trouble spent on them.

Pre-Emergency Picture

It was well known that trouble was brewing. Planters and miners were aware that their lives were in danger and protection was asked for before any serious outbreaks of lawlessness actually occurred. Almost continuous strikes on the plantations and at the mines often for apparently frivolous causes were omens pointing to further trouble. But to the tourist travelling through Malaya the general picture was one of peaceful tranquillity. At that time if you happened to be touring Malaya by car the pleasure of driving through the small villages in the evening was a very real one. As the sun was setting you could see the villagers sitting at the doorstep of their picturesque houses, chatting and gossiping and ready to wave a friendly greeting to you as you passed by or, if you broke down on the road, always ready to give what assistance lay in their power. The war appeared at last to be over under these conditions and the scars rapidly disappearing. Bridges had been rebuilt, wrecked cars and old broken-down tanks had either been removed or overgrown with lallang (the local grass). Certainly it looked a smiling countryside with prosperity apparently round the corner for all classes of the community. Supplies of rice were improving monthly. Wages of labourers were higher than they ever had been in the history of Malaya and yet all this peaceful scene underwent a startling and rapid change almost overnight as the Communist bandits struck with cold-blooded murder and wholesale destruction of property in a bold attempt to paralyse the industry of Malaya and to seize the country for Communist purposes.

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The Emergency

The outbreak of banditry was well organized. In May 1948 serious attacks on life and property were carried out simultaneously in many parts of the country. Planters and tin miners were taken out of their bungalows and shot in cold blood by well-armed and disciplined bandits, many wearing uniform and in military formation. Their methods were simple enough. Having first held up the labour gangs on the estate and confined them to their quarters, they walked up to the manager's bungalow, fully armed, and arrested the unarmed manager and assistant manager. They took them out, tied them to trees and shot them. Having carried out their execution they departed to their organized camps in the jungle. When messages got through from the estates, police and soldiers coming to the rescue were themselves ambushed by groups of bandits.

This state of affairs produced the emergency which was officially declared in June 1948. One of the first results of the emergency was an immediate demand for arms and armed protection from estates, mines and many other business concerns throughout the country. Needless to say, all demands could not immediately be met, but all available arms were distributed and places considered of vital importance were supplied with military or police armed guards.

At H.Q. Malaya District we were immediately plunged into a series of conferences. Each branch of the service was requested to state its requirements to deal with the situation under two headings, one was immediate requirements with troops at their present strength and engaged under active service conditions in the jungle. It was realized that the bandits would have to be engaged on their own ground in their hidden jungle camp. The second heading was future requirements, the estimated strength being given as an extra brigade with auxiliary troops.

The first request by the A.D.M.S. Dist. was—"Can you give me a rough estimate of casualties to be expected in the next few months?" but no one was prepared to give a firm figure. I concluded my own estimate was probably as good as any one else's. I have many times requested an estimation of casualties but seldom received a clear-cut answer. The only time I can personally remember a Commander giving a definite estimation was when listening to Lord Montgomery's final speech before Alamein, he stated that he was prepared to accept 50 per cent casualties. He repeated this twice to make quite sure everyone understood it. I think we all felt sorry for our next door neighbour on that occasion.

Division of Control

Malaya Dist. was subdivided into 3 sub-districts each commanded by a Brigadier—North Malaya Sub-District with H.Q. at Taiping; Central Malaya Sub-District with H.Q. at Serembam and Johore Sub-District with H.Q. at Johore. North Malaya Sub-Dist. and Johore Sub-Dist. each held an A.D.M.S. appointment while Central Sub-Dist. had a D.A.D.M.S. on the staff. The A.D.M.S. at Dist. H.Q. at Kuala Lumpur was myself.

Before estimating our immediate requirements it was necessary to review our

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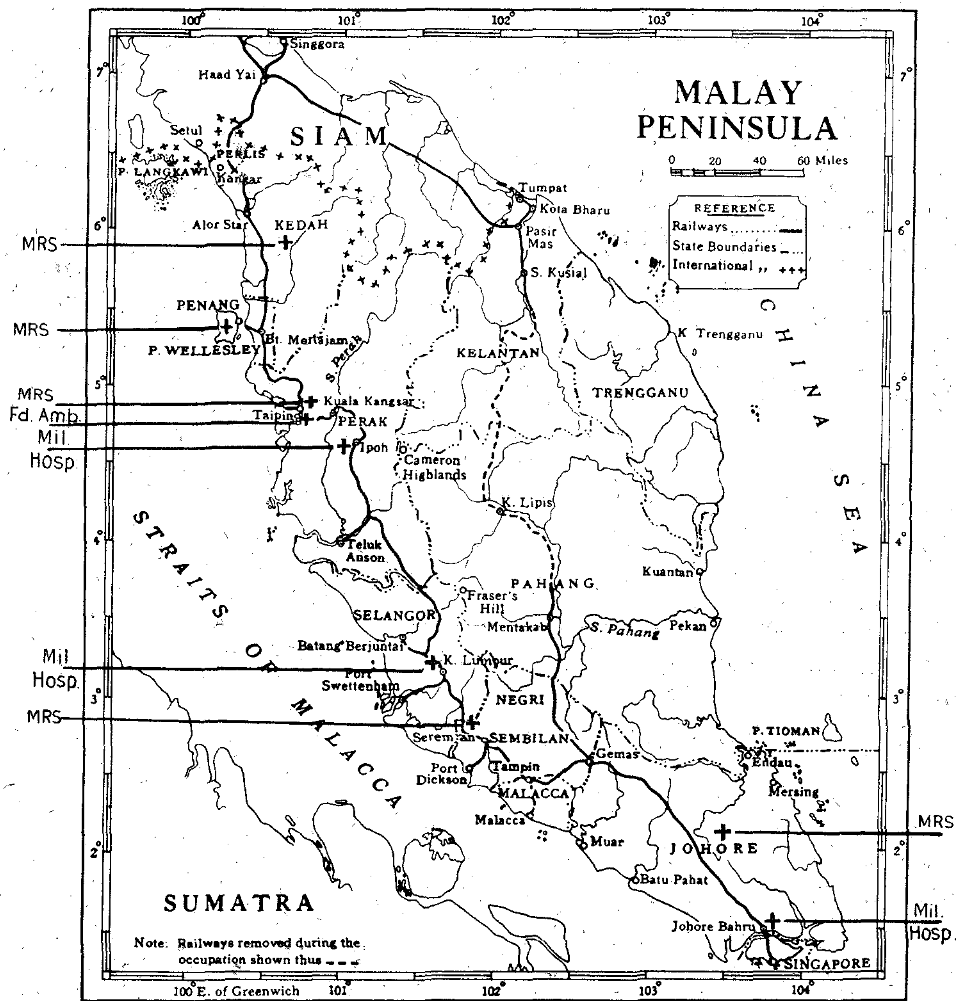
medical resources. There were four military hospitals in the district, one being a convalescent hospital in the Cameron Highlands. All these hospitals were in commandeered buildings and the civil medical authorities were busily using every legitimate effort to take them over, as they were short of accommodation. The largest of our military hospitals was in a portion of the Civil General Hospital at Kuala Lumpur. We had already returned our administrative building as well as several wards and this left us with no possible room for expansion in the hospital itself but there was room for tentage between the wards if necessary. This hospital was equipped for 300 beds.

The second hospital was situated in Johore, again part of the Civil General Hospital but this was a modern hospital in spacious grounds well equipped and with room for expansion. It was equipped for 200 beds.

The third hospital was in Ipoh—an unsatisfactory building for a Military



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Hospital; it had previously been a Chinese Maternity Hospital. There was no possibility of expansion here except in tents in the rather inadequate grounds. This hospital was equipped for 200 beds.

The fourth hospital was a convalescent hospital situated in the Cameron Highlands. This building was previously a Convent School and the nuns were naturally very anxious to regain it for their own use. This building was capable of expansion, but the approach to the hospital was difficult and liable to be cut off if operations increased in intensity in this area. It was equipped for 100 beds.

Besides these four hospitals there were five medical reception stations. From North to South as follows: At *Sungei Patani* a very good one just completed, accommodation 30 beds. One at Penang in a good building—part of the original barrack scheme for Clugor barracks. Accommodation 20 beds. Capable of expansion to 40 beds. One at *Taiping* (*Kamunting*). This was in hutted accommodation; accommodation 20 beds capable of expansion to 40 beds. One at *Serembam,* 30 beds expanding if necessary to 40. This M.R.S. was situated in an old masonic lodge building which was urgently required for its original use. One at *Kluang* in huts capable of expansion from 20 to 40 beds.

These four hospitals and five medical reception stations give a figure of 700 equipped beds without expansion.

There was one Field Ambulance in the District at the time. It was situated at Taiping in an old convent building. This Field Ambulance was not up to strength in officers, O.R.'s or vehicles and it was not due to be brought up to strength until 1949.

Our other resources included a Field Hygiene Section with its H.Q. at Kuala Lumpur, and a small but complete ambulance train capable of taking 40 lying cases.

Medical Equipment

All four hospitals held three months' reserves of medical equipment and all were in a measurably good position to deal with an influx of casualties. The five medical reception stations held a small reserve of medical supplies, but the buildings which they occupied were not suitable for anything but first-aid surgery and the medical officers in charge had had no special surgical experience or training.

This was roughly the picture one had in mind when considering what were the essential medical requirements to meet the emergency situation.

Having carefully considered our available resources in personnel and material our requirements fell under these two headings.

Personnel

Medical Officers.—All hospitals were reasonably well staffed but all regiments were not supplied with medical officers. The Gurkha Regiments had arrived without medical officers and medical officers had to be found for them. Therefore an increase in the number of medical officers for duty with regiments was

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requested. The aim was to give a medical officer to every regiment actually engaged in operations.

The second request was to have the Field Ambulance brought up to strength as rapidly as possible so that after intensive training they could be detailed to take part in active operations. This was to prevent continuous demands being made on the hospitals for personnel for active operations.

Thirdly, the establishment of a surgical team available at short notice for working with the Field Ambulance or as a separate unit attached to a civil hospital without adequate surgical facilities to deal with a rush of casualties.

Fourthly, to have the ambulance train increased in size. Two carriages belonging to the ambulance train were at that time out of use and required a complete overhaul; the staff of the ambulance train to be increased proportionately.

Equipment

Increase of stretcher and blanket dumps at all hospitals and M.R.S.s. It was considered that the railway line and roads might be blocked for considerable periods and that as a result the demands on air supply would be very heavy; the air priority would be operational except for the evacuation of life and death casualties.

Secondly, the supply of medical mobilization equipment to regiments who were not in possession.

Another immediate problem at this time was to ensure that all medical officers acting as R.M.O.s had an immediate refresher course in first-aid surgery at the earliest possible moment.

Having made these major requests amongst many others it is interesting to look back and see how they were met. First let us consider the request for increasing the number of medical officers to act as R.M.O.s. We required another six as rapidly as possible. The reply came back from Medical Directorate H.Q., F.A.R.E.L.F. "None available at the moment but we will do our best for you." Within three days 3 M.O.s had reported to my H.Q. and a few days afterwards another 3. Medical Directorate F.A.R.E.L.F. and Singapore Dist. had stripped themselves to supply us.

I would like to consider now what goes to the making of a good R.M.O. What is required normally is the physically strong well-built cheerful type who is ready to take the rough with the smooth. A good mixer and if possible a medical officer who is really keen on going to a regiment. This type of medical officer must be sent to a good regiment. It is a great mistake to send this type of medical officer to a regiment which does not take a real interest in their doctor and in medical problems connected with the regiment. The result is that the best regiments almost always get the best R.M.O.s. But surprises are frequent in dealing with medical officers. I have sent more than one apparently unsuitable medical officer to a good regiment because they happened to be the only one available and they have turned out howling successes. In other words, it is well to remember when posting individuals that one cannot always judge the book by the cover. This reminds me of one occasion in the desert when

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holding the appointment of A.D.M.S. 10th Armoured Division, I was tackled by an O.C. Regiment immediately after a minor engagement which had lasted for three or four days. He came to Divisional H.Q. especially to see me. Could I change his medical officer as he was not quite the type the regiment required. When the show started he disappeared into the battle and was said actually to have taken part in the show with rifle and hand grenades. In fact he was much too warlike. The O.C. went to some length to explain what he wanted and that was a medical officer who would look after his men in the welfare sense. He said he required someone more like a padre and of a really sympathetic nature. I said I quite realized the type of M.O. he required and that I would be visiting the regiment the next day and would interview the medical officer but it was most unlikely that I would be able to change him. However, about half an hour later another O.C. regiment called in and after some conversation about medical supplies and the show that was just finished he came to the point of his visit. Could I possibly change his M.O.? If I could give him someone who would always be up with the men in action it would help the morale of the regiment greatly. His present medical officer was a very pleasant fellow but more of a padre than an M.O. really not the type for a fighting battalion. I told him I might be able to do something about it and having interviewed both medical officers I found they were both delighted with the idea of a change of regiment. The happy sequel to this true story is that in due course our M.O. the padre type won the *M.C.* and the other one was mentioned in dispatches. Postings do not always work out as easily as that but it helps to illustrate that a medical officer posted to a good regiment who is prepared to take a real interest in the regiment he is attached to soon settles down and ends by being exceedingly sorry to leave the regiment when the time comes for him to return to hospital or other duties.

Another quite recent picture comes to my mind of a R.M.O. who had been posted to a Gurkha regiment. A few days after posting the regiment received orders to undertake quite an extensive operation to clear bandits out of two villages which they had occupied. The medical officer came to see me before the operation very anxious and worried about it all. Could he have a hospital job when he came back as he considered he would be more suitably employed there. The operation lasted for about seven weeks and was quite a gruelling affair with strenuous jungle marches and a fair number of casualties. In due course the medical officer reported back almost unrecognizable from the extremely anxious medical officer who had departed seven weeks before. He was full of the show and what had been accomplished and how splendid the medical detachment had been. I said what about that hospital job but he said he would rather not have it at present as he had heard that the regiment would shortly be under orders for another show and they would require him.

No. 1 Field Ambulance

The request to bring the Field Ambulance up to strength at an earlier date than was originally intended was granted and personnel both British and Asian

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were posted and intensive training was begun. The request for full strength in vehicles took a considerable time due partly to the lack of skilled drivers available and the necessity for complete overhaul of vehicles which had been lying in car parks and depots for many months.

Sufficient officers and other ranks were soon trained and equipped with enough vehicles to send out a functioning A.D.S. when and where required. At this period great help was given to the Malay regiment by detaching sections to assist them on active operations. This was officially not our responsibility, but we were requested to give all assistance possible to the Malay regiment owing to their shortage of trained medical officers, medical other ranks and equipment.

Surgical Team

The establishment of a surgical team appeared to be a pretty obvious necessity at this time for use in forward areas. The request was immediately met in a very common-sense manner. The complete equipment was immediately sent up to the Military Hospital at Kuala Lumpur with instructions for the surgeon and anæsthetist at Kuala Lumpur to take the equipment out if the surgical team was required very urgently. Another surgeon and anæsthetist would be flown up from Singapore to replace those sent out. If time permitted the team would be sent up from Singapore and collect their equipment *en route* to their destination. This arrangement worked very smoothly when a surgical team was requested by A.D.M.S. North Malaya Sub-Dist. to work in conjunction with an A.D.S. of 1 Field Ambulance. The troops were operating in the extreme north of Malaya and it was considered that casualties might be heavy and the journey down was a long one before surgical facilities could be given. The surgical team established themselves in a small building in close proximity to the A.D.S. As it happened there were no serious battle casualties on this occasion. In spite of this, useful lessons were learnt and if heavy casualties had occurred their strategic position was a valuable one and it is reasonable to assume that lives would have been saved and that convalescence would have been more rapid after treatment within a short period of being wounded where they could be held in comfort for a considerable number of days after operation.

Equipment

The request for extra stretchers and blankets for each hospital and M.R.S. was met very rapidly. The Base Depot of Medical Stores had our supplies on the train within twenty-four hours. Complete mobilization equipment sets for regiments were checked, put together and sent up very rapidly. In fact all medical indents were met in a remarkably short period.

It can be seen from this brief outline that we were not "caught napping" when the emergency was proclaimed. In point of fact we were medically in a very sound position as regards hospitals and equipment, thanks largely to my predecessor at Kuala Lumpur and the insistence of our higher formation at Singapore on keeping up sufficient hospital beds in Malaya to cope with a situation such as had arisen.

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Specialized Equipment

Demands for specialized equipment of all sorts soon began to pour into District H.Q. and the medical Branch began to receive its quota. The following items amongst others were discussed: The normal stretcher was much too heavy for jungle warfare, could lighter ones be supplied? Could we have an ambulance plane specially equipped to carry patients? A special group of jungle fighters was being formed. Could we supply a special medical pack for them?

Stretchers.—It was pretty obvious that the "stretchers universal" was too heavy for jungle work but there were very few airborne stretchers in the country, so an urgent request was made for them and they were in due course sent out from U.K. In the meanwhile we experimented with Neil Robertson stretchers and also with some emergency stretchers constructed with the assistance of R.E.M.E. They looked excellent. Strong green canvas with straps to prevent the patient slipping when going up and down hill and large slots for bamboo poles down each side of the canvas. As I said, they looked a simple and workmanlike job and several of them were immediately dispatched to No. 1 Field Ambulance for trial under jungle conditions. However, they did not fulfil their promise, possibly due to the stitching not being of sufficient quality and as reports of the immediate arrival of airborne stretchers came in, these emergency stretchers were not made in large numbers. The Neil Robertson stretcher used with a single bamboo pole was reasonably satisfactory as regards weight but too hot and uncomfortable for the patient on a long journey. The most satisfactory stretcher for use in the jungle is undoubtedly the Neil Robertson modified with four canvas loops. The patient is carried by four men each carrying a loop close to the body and as "air drops" are now a regular feature of jungle warfare the dropping of a modified Neil Robertson appears to provide the best answer instead of trying to struggle through the jungle with other forms of stretchers under very great difficulties.

Ambulance Planes

An ambulance plane was asked for at an early stage in the emergency but this could not be supplied. Landing grounds for Dakotas and other heavy aircraft were being developed and air strips for Austers were rapidly increasing all over the country. If a specially equipped ambulance plane could not be provided, a specially built Auster to take one patient in comfort would have proved of great value. However we never got further than improvisation with Austers, using again the invaluable Neil Robertson stretcher. Fitted with two wooden boards to give support to the stretcher it gave the patient a reasonably comfortable ride in a somewhat cramped position.

I would like to stress here that although we had no ambulance aircraft allotted yet I cannot remember one single case of serious delay in evacuation of a patient by air once the request for air evacuation had been submitted to the right quarter. The sequence of events was somewhat like this. A telephone message to the A.D.M.S. Dist. Office. "Air lift required for patient." It might be a wounded man who had just been carried out of the jungle or for a case

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already in hospital which required immediate specialist treatment at Singapore. Air Command at Malaya Dist. was immediately informed explaining exactly what is required. The reply was often, "no plane available all operational but we will see what we can do will ring back." In about ten minutes a message is received saying that it is all fixed. By this you can realize that although we did not have a special ambulance plane yet our cases were and still are being evacuated by air when necessary and with great efficiency.

Liaison with Civil Medical Service

Close liaison with the Civil Medical Service was even of greater importance now than under normal conditions. Difficulties had been experienced and were still being met with owing to our prolonged occupation of civil hospitals. This was largely due to continuous delay in obtaining permission to build on sites considered suitable for military hospitals. Protracted negotiations were undertaken to obtain the necessary building site for our hospital outside Kuala Lumpur. When the emergency was declared I found it necessary to request the use of all civil hospitals in Malaya for emergency casualties. A short conference soon cleared the air and offers of reciprocal help by ourselves for civilian casualties soon gave a picture of complete agreement. Cordial relations were established which stood the test of time. I consider that we owe a considerable debt of gratitude to the Civil Medical Service of Malaya for their unfailing assistance given to our casualties when they were admitted to civil hospitals.

Ferret Group

These specialized groups of jungle fighters were formed in the early days of the emergency and are now disbanded. They were used as a highly mobile and independent force. British civilians who had war experience with Force 136 or who had specialized knowledge of the jungle were asked to help form these groups. A number of outstanding men already holding civilian appointments immediately volunteered and selections made. Each group was commanded by an experienced civilian or a British officer with previous jungle experience. Their training was undertaken under very arduous conditions with prolonged jungle marches. Volunteer medical orderlies were required and specialized medical equipment for each group. Needless to say there was no lack of volunteers amongst the medical orderlies. Six groups rapidly went into training and medical orderlies were supplied for each group as it was formed. The medical equipment known as Ferret packs were worked out with great care. It was realized that they would not have a medical officer with them and that they would be in the jungle for long periods and at times even separated from the medical orderlies. Therefore a smaller first-aid pack was built up for each individual member and a larger and more comprehensive one for the medical orderlies. The contents of these packs had to be specially protected to withstand prolonged heat and soaking in the jungle. Some of the methods of protection of the drugs were quite ingenious. Tablets were carried in plastic rifle-oil bottles and they were fitted into the standard hold-all as issued with the

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clothing scale and covered with a cellulose wrapping, easy to get at and completely waterproof. In the larger packs tablets were carried in stout glass screw-topped bottles which are used for certain media in pathological laboratories. These improvised packs served their purpose very well. Thermometers and instruments were carried in the shallow tin boxes normally used for transfusion outfits.

Penicillin Transfusion Chest

This chest was devised in order to meet the demand for transfusion of wounded and also to allow systemic penicillin therapy to be administered at the earliest possible moment. It was necessary to make it as compact as possible so that the R.M.O. could take it with him at any rate into the jungle area. After a short conference we decided what was necessary and a suitable and rather attractive wooden box was made by the local Chinese according to specification. Each box was divided into compartments to fit the contents. It was strong enough to stand up to parachute drops and for general rough usage. The box with contents could be carried in one hand and it certianly has been a success. My thanks are due to Major Symington, at that time Deputy Assistant Director of Pathology, Malaya Dist., for his painstaking work in ensuring that the contents of each box were in perfect condition before being dispatched. The plasma, glucose saline and distilled water were all checked under his personal supervision. The giving sets were all re-tested and re-sterilized. He also carried out exhaustive tests which proved that crystalline penicillin would keep its potency under jungle conditions for from two to three months. The contents of the box were as follows:

2 bottles of dried plasma
2 „ „ isotonic gluco-saline
2 „ „ distilled water
3 sterile giving sets
1 (4 oz.) bottle of sulphathiazole penicillin powder
8 bottles of 200,000 units of crystalline penicillin
1 pint of distilled water.

The chest was possibly a little bigger than a medical companion; it was naturally heavy for its size but was easily transportable and could be carried in one hand.

Arrangements were made for each box to be returned after use to the District Laboratory where they were immediately replaced. If not used they had to be returned after two months for checking and testing as regards sterility of contents and potency of penicillin. Clear and simple typewritten directions were inserted into each box to ensure that there could be no delay or confusion as regards the use of contents. This might almost seem unnecessary but in practice it was found useful and in fact essential. These boxes have been dropped successfully in the jungle. A supply is always ready for immediate dispatch by air as well as one for each medical officer who requires it for operations. The supply of these boxes has ensured the earliest possible use of transfusion and penicillin therapy in the jungle area.

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We have now seen very briefly the pre-emergency picture, the emergency and a few of the medical supplies for that emergency and how they were met, including personnel and equipment, but I have not said anything about the actual evacuation of casualties from the forward areas. I would like to mention this in some detail. First of all it is essential to realize that there is no forward area in the strict sense of the word even during jungle operations, as hostilities may break out anywhere and at any time once troops move out of the large towns or outside the perimeter of their camp. Secondly, casualties may occur under such completely different circumstances that it is necessary to consider them under two headings.

(1) Those occurring as the result of ambushing on main or secondary roads.

(2) Casualties occurring in the jungle as a result of ambushing or direct assault.

As a result of this situation the planning for the evacuation of casualties has to be somewhat fluid as it is almost impossible to foresee in what region the next group of casualties is likely to occur. A comparatively large force may go out fully equipped with a medical officer, ambulances, a section of a Field Ambulance and all medical paraphernalia and engage in extensive sweeping operations and come back again after several days without any encounter with the enemy; while a small force working independently in an apparently safe area may run into an ambush resulting in most of the force being either wounded or killed.

Let me first try and give you a picture of a road ambush occurring on one of the secondary roads. Two lorries about 200 yards apart are travelling along a winding secondary road at about 35 miles an hour. Everyone is on the alert as it is known that bandits have recently been seen in the vicinity but the jungle on these smaller roads reaches almost to the roadside. Coming round a bend fire is suddenly opened from both sides of the road from completely concealed hide-outs, resulting possibly in the overturning of the first lorry as the driver is killed instantly. Casualties are 3 dead and 3 wounded in the first lorry. The second lorry has just managed to pull up before entering the zone of fire, the men have sprung out and are advancing as rapidly as possible on each side of the road to engage the ambushers. They may be successful and get one or two but it is more than probable that the bandits will have already melted into the jungle on each side of the road. It is a very unsatisfactory form of warfare in which all the aces appear to be in the hands of the bandits.

Each lorry is carrying a first-aid outfit including shell dressings and the men are equipped with their first field dressings. There will therefore be sufficient dressings to give reasonable first aid to the wounded. The men have now had first-aid lectures given by their own medical officer and should be able to deal with the patients until more skilled assistance arrives or until they are conveyed to a first-aid station or hospital, as it is not likely that this small party will have trained R.A.M.C. orderlies with them. The evacuation of casualties from road ambushes depends on local circumstances. If there is an

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ambulance anywhere in the vicinity they may be able to contact it by telephone from the nearest village.

What generally happens is if an ambulance is not available that a private car is commandeered or a lorry used and the patients are moved as comfortably as possible to the nearest local hospital or civil dispensary. All civil hospitals have been instructed to inform the military authorities immediately they receive military casualties. This is in order that arrangements can be made to evacuate these cases to military hospitals as early as possible or if unfit to be moved to ensure that they are visited by a military medical officer at the first opportunity. The further evacuation of these cases may be by road, by air or by ambulance train according to location and circumstances.

Evacuation from Jungle Area

I want to consider a hypothetical case of a seriously wounded man deep in the jungle area belonging to a force with a medical officer attached. The patient we are considering is a strict stretcher case. He has been wounded when three days' march into the jungle. What can be done for him? His wound can be dressed with sulphathiazole penicillin powder, improvised splinting can be used, if necessary he can be given morphia. A shelter can be built very quickly for him and the medical officer may decide he requires a transfusion. Penicillin therapy can be started right away, but an air drop will be required in order to obtain a transfusion chest and a stretcher. The column is in wireless communication and in a matter of hours a transfusion chest and stretcher may be dropped successfully in a "clear space" as near as possible to the wounded man. If there are not sufficient hours of daylight this will have to be postponed until the following morning.

When the patient is fit to be moved (which may mean a matter of hours or days) the long trek back begins. It may have taken four days to penetrate to the area where the casualty occurred, travelling in single file, but it will take possibly sixteen days if not more for stretcher bearers to hack their way out carrying this wounded man on a stretcher and a great number of men will be employed as relief stretcher bearers. Eventually when the wounded man reaches the jungle entrance he will most likely be conveyed by a jeep fitted with stretchers until a road is reached suitable for an ambulance car to convey him to the nearest military or civil hospital with surgical facilities.

The evacuation of wounded from the jungle is one of the greatest snags of jungle warfare and it is certainly a big medical headache and a worry to all Commanders taking part in jungle warfare. A partial solution to this problem would have been the employment of trained elephants which are capable of forcing their way through the densest jungle at the rate of one mile in three hours. Wounded could be carried out and medical supplies such as stretchers carried in. They have been used in North Malaya on at least one operation with success but their general use has not been adopted. There are a certain number of trained elephants in the country and in my opinion sufficient use has not been made of them. It is admitted that they are vulnerable and difficult

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to replace but their value would be well worth the risk of losing one or two through enemy action. The other partial solution is of course the helicopter, three of which are due to arrive shortly. How many lives will be saved by the use of a helicopter it is difficult to say, possibly only one or two, but there is no question about the effect on morale that the presence of a helicopter will give. The helicopter could hover over a "clearing" and extract the patient in a matter of hours when at present it means days or weeks of arduous toil to remove a stretcher case from dense jungle by manual labour.

The Role of the Field Ambulances

There are two Field Ambulances now functioning in Malaya.

Both have fully justified their existence during the emergency although neither of them have been fully employed in the traditional manner, but that is entirely due to the nature of the country and the type of intermittent warfare against well-dispersed bandits.

The present role of these Field Ambulances is to have fully trained sections and if necessary an A.D.S. ready to take part in operations which are continuously being planned at Brigade and Divisional level. Owing to the nature of the country the formations operating in one area are rarely larger than 2 battalion strength. But a battalion operating in the jungle requires more medical support than that which can be provided by their own medical officer. Hence the value of trained sections of a Field Ambulance who are now experts in jungle warfare.

Summing Up

(1) The declaration of an emergency in Malaya did not find the medical organization unprepared.

(2) Requests for increases in medical personnel and equipment of a specialized nature were met with the minimum of delay and no red tape.

(3) The very urgent problem of extracting wounded men from the jungle has not yet found a satisfactory solution.

(4) The attachment of an air ambulance to Air Command would greatly add to the comfort of patients travelling by air in Malaya.

Finally the sympathetic and helpful support given to me at all times by the Medical Directorate G.H.Q. Singapore coupled with the whole-hearted loyalty given by medical officers, other ranks and civilians both on my own staff at District H.Q. and from medical formations throughout Malaya were outstanding features of this period.

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