

for the work, and these have been replaced by others. Superintendent J. S. Cox has been in charge since the work began and has also had charge of the Supply Depôt. I cannot speak too highly of the manner in which he has performed his responsible duties, and I regret that he is compelled to resign. Sergeants O. E. Gane and W. H. J. Daniells, Corporals A. J. Mace and A. G. Clarke have all been promoted to these ranks by me. They have assisted in disciplinary control and have performed other responsible duties to my entire satisfaction. Privates R. S. Cass, H. W. Bremer, C. C. G. Hussey, W. J. Barker, and D. F. B. German form the office establishment, and the work devolving on them has been heavy and responsible. To the remainder of the staff have been assigned ward duties. Taken as a body, I cannot speak too highly of the tone and general conduct of the men of the St. John Ambulance Brigade. Before the hospital was opened for the reception of patients the first batch had to perform very heavy duties under severe climatic conditions, and, subsequently, the whole staff had to adapt itself to the working of a hospital with which every member was unfamiliar, and they have done their work well.

#### THE ST. JOHN AMBULANCE ASSOCIATION. A BRIEF HISTORICAL SKETCH.

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NEARLY three decades have gone by since the work of the St. John Ambulance Association was first introduced into India, and nearly one since it was taken up in real earnest in this country. Several years have passed since I first interested myself in the Association and its workers, and I may be pardoned if I make the assertion that not a very large proportion of its innumerable workers have ever sought to know the origin of the institution or the way in which its wonderful work originally came into existence. During the past few years I have seen hundreds, nay thousands, of persons of both sexes, all colours, castes, and creeds, identify themselves with the work of the St. John Ambulance Association, take up most zealously the study of First Aid to the Injured and Home Hygiene, acquire a standard of knowledge most creditable to themselves, and render the most useful service indeed to the sick and the injured. And yet, if asked what is the Association to which they belong and what the history of its origin, they could, I am sure, give no answer. Possibly they have never been enlightened on these points; perhaps in many cases they have not had the time or the facility to discover for themselves. Yet the truth remains,

that the majority of Ambulancers are without the least knowledge regarding the historical aspect of their subject, and I make this a reason for writing a short paper on it. But then, if the ignorance of which I speak were confined only to the lay people who work for the Association in various capacities, I should have no justification whatever for writing such an article for a medical journal intended mostly for professional readers. It is perhaps sufficient excuse for me when I say that I have found a great many medical men in this country—medical men actually engaged as teachers and examiners in ambulance work—ignorant of the history of the Association under whose auspices they are rendering such valuable service, and ignorant of the origin of the work itself to which they are so devotedly interesting themselves.

The history of the St. John Ambulance Association, which as such came into existence only in 1877, dates very far back, to the exciting times of the Middle Ages. Let the reader carry himself back to the eleventh, twelfth, and thirteenth centuries and recall the period of the Crusades, that series of military expeditions undertaken by some of the Christian nations of Europe with the object of wresting Jerusalem from the hands of the Mahomedans. Let him call back to mind the times which extended, with varying fortunes for the Crusaders, from the year 1096 when Godfrey of Bouillon led his first enterprise which resulted in the conquest of Jerusalem, the liberation of the Holy Land from the yoke of the Egyptians, and the exchange of his title of "Protector of the Holy Sepulchre" for that of King. I say, let him review the period extending from then till about 1271, which year saw the end of the eighth and last expedition, an unsuccessful one, under the leadership of Louis IX of France. This was a period of history pregnant with important events. They were times during which millions of lives were lost and countless treasures sacrificed to vain enterprises, and that without the dream of the Christian people being realized, without a Christian Kingdom being established at the city of the Holy Sepulchre.

It is on record that about the middle of the eleventh century, towards the end of the reign of William the Conqueror in England, a small band of Italian merchants from a little town in the province of Salerno received the permission of the Sultan to build a hospital within the walls of Jerusalem. To this hospital were admitted poor pilgrims who found their way to the city. In the last year of that century, in 1099, one of the founders of the hospital was appointed by Godfrey to be the first Master of that institution. His successor, one Raymond du Puy, nineteen years later, conceived the idea of forming the fraternity of the Hospital into a new Order of

Knighthood whose members should combine in themselves the triple functions of priest, soldier, and physician. This then formed the *fons et origo* of the great present-day work of aiding the sufferer both in peace and in war. The plan of the Master was highly approved, and it soon achieved the greatest popularity, the sovereigns of Europe granting large gifts of land and of money, and many distinguished nobles placing their services at the disposal of the brotherhood. In this way a new Order came about, its members combining in themselves "the piety of the priest, the devotion of the physician, and the enthusiasm of the soldier." It is this Order, the Order of St. John of Jerusalem, which, with its varied history, has survived through all these centuries, has played so important a part in human affairs, and which, in its present form, promotes more than ever the humanitarian objects with which it was founded.

The headquarters of the Grand Master ruling this brotherhood gradually shifted from Jerusalem to Acre, thence further westward to the island of Rhodes, until finally about the middle of the sixteenth century a transfer took place to Malta. Here the Knights remained and flourished until they were dislodged by Napoleon I in 1798. The sovereignty of the island of Malta was granted to the Knights of the Order by Charles V, Emperor of Germany, King of Spain, and Ruler of the Federation of States known as the Holy Roman Empire. The island was fortified by the Knights, who also improved their navy, whereby they were able to establish themselves protectors of all peaceful commerce against the pirates infesting the Levant and the Mediterranean generally.

The Knights of Malta at no time lost sight of their medical duties, and they built, equipped, and maintained for over 250 years a hospital, which in fact is the present military hospital at Valetta. The Knights Hospitallers were soldier-priests who were gallant enough to recognise that the healing of a sick man's wounds was as knightly a service to perform as the vanquishing of a foe in the field. The Grand Master appointed special medical men whose duty it was to teach the Knights of the Order First Aid to the Injured.

Meanwhile, soon after the Order was founded in Jerusalem, it was introduced into England, where it established its headquarters at Clerkenwell, then a village near London, now almost the very heart of the City. In England it rapidly attained great power and influence, and the Priory at Clerkenwell became considerable in extent and was associated with a hospital, thus maintaining the medical character of the Knights of St. John. The course which the fortunes of the Order ran in England was, however, not as smooth as it might have been, for in 1540 Henry VIII dissolved the body, as he did all similar fraternities.

In 1557 it was re-established under Phillip and Mary. Later, Elizabeth confiscated all the property of the Order though she did not dissolve the Order itself. In 1830, during the reign of William IV, there was a final revival. His present Majesty, formerly Grand Prior, is now the sovereign of the Order. Since 1911 His Royal Highness the Duke of Connaught has been Grand Prior of the Order of the Hospital of St. John of Jerusalem in England. St. John's Gate, with its numerous curiosities and its treasures, formerly occupied by the English Hospitallers at Clerkenwell, is now the home of the English Order.

So far, however, as the department of the work of the Order known as ambulance work is concerned, it did not claim the earnest attention of Europe until as late as the latter half of the nineteenth century. When Napoleon III started his 1859 campaign, the horrors of war as seen at Magenta and Solferino showed that manifestly the regular medical service of even what were then considered the largest armies of the world was utterly inadequate to cope with the large numbers of those wounded in modern warfare. Everything was found to be lacking—doctors, appliances, comforts, and even food and water. All that was sufficient for the army's needs in times of peace broke down in its working during the stress of war, owing to insufficiency. Enlightenment and considerations of humanity pointed clearly to the necessity for an organisation of voluntary medical aid societies to help the public medical services and to render prompt and adequate aid to the injured in times of emergency.

Public interest was soon aroused as the need for an organised movement on these lines was pointed out. Sympathy poured in on all sides, and Switzerland taking the lead, the Geneva Convention was held in 1864. This diplomatic conference of representatives of the leading European powers formulated international rules for the purpose of securing the neutrality in warfare of hospitals, ambulance parties, and others concerned in affording relief to the sick and the wounded, such aiders wearing the Geneva Cross, a red cross on a white ground, as a badge of office.

Regarding the "Sign of the Red Cross" the French legendary poem "Le Brassard" by Vte. de Borelli, as translated by H. N. Ralston, relates how the Goddess of Pity who was

"winging her way

To the field of battle where a young soldier lay,"

and how,

"She smilingly sought out a white linen band,  
All untaught in letters, yet deft was her hand,  
She dipped in his life-blood her finger so fair,  
And pressed the fine linen—lo! the Red Cross  
was there!"

So that

"The Daughters of France, loving legend and charm,  
Now wear the Red Cross as a sign on their arm."

Following the Geneva Convention, Ambulance and Red Cross Societies sprang up all over Europe, and in England they were always associated with the Order of St. John.

In 1877 the St. John Ambulance Association as such came into existence as a department of the Order of St. John, in consequence of the growing interest that was felt in all ambulance work.

The Association was introduced into India in 1888, but it was not till some seven or eight years ago that a real and lively interest began to be felt in its work. At the present time there is perhaps no society of a similar nature that commands as much public sympathy and possesses as much popularity as does the St. John Ambulance Association, and that amongst all classes, sects, and creeds. The body has its branches all over the country, and every day there is a cry for establishing new centres and sub-centres from which to spread its valuable and charitable work. The Indian public have begun now to realise what the Association means, what its precepts are, what its utility is in times of peace, that is, on the civil side of its work, and how useful it can be made for times of war such as the present, not only by rendering one and all familiar, so far as possible, with the art of aiding the injured, but also by training men and women who may band themselves into brigades and form what may be called an auxiliary corps to aid the regular medical services in their ambulance work in the field, that is, on the military side of its work.

For most of the historical facts contained in this paper I am indebted to the first chapters of the White Book of the St. John Ambulance Association.

#### PRELIMINARY NOTE ON THE TREATMENT OF KALA-AZAR BY TARTAR EMETIC INTRAVENOUSLY, AND INUNCTIONS OF METALLIC ANTIMONY.

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As already recorded (*Indian Medical Gazette*, May, 1915) I was led last year by reports on the value of antimony preparations in the treatment of sleeping sickness to decide to try intravenous injections of tartar emetic in kala-azar, although even Gaspar Vianna's results of its use in dermal leishmaniasis had not then come to hand. Unfortunately, owing to lack of clinical facilities at that time, I had to wait for six months before commencing its use, but I had already given the injections in a number of cases of the Indian form of kala-azar quite independently of any other worker before the report of its successful use in the Mediterranean variety of the disease

by Drs. Cristana and Caronia in Sicily reached me. I have now had over four months' experience of the treatment, and, although it is far too soon to come to any final conclusions on the subject, yet in view of the great importance of the matter in India, it appears to be advisable to briefly record the general impressions derived from my experience so far.

I first used a one per cent. solution, as recommended in sleeping sickness, and began with very small doses of less than one cc., but rapidly pushed it up to several cc., when I found it more convenient and quite safe to use a two per cent. solution and to give the injections every two or three days, gradually increasing them from 2 cc. up to 10 cc. as long as nausea and epigastric pain are not produced, and I have seen no injurious effects from these doses. A fine sharp needle is essential, a little blood being first drawn up into the syringe to make sure that the vein has been entered, as tartar emetic is very irritating subcutaneously. In one case a little of the one per cent. solution escaped into the tissues around the vein in spite of this precaution and a small slough resulted.

It was not until doses of 4 or more cc. of the one per cent. solution were reached than any material change other than temporary reduction of the fever was noted. In some cases rigors followed the larger doses, but after a time they ceased and the temperature remained at a low level or at the normal point, weight was steadily gained, and marked improvement resulted in several instances, including reduction in the size of the spleen. In all the cases the diagnosis was verified by spleen puncture, which is most essential in testing any treatment for kala-azar. On repeating this procedure after cessation of the fever the parasites were found to be greatly diminished in numbers and small and shrunken in appearance in several cases, as is often seen in patients on the road to recovery. Three patients at this stage felt so much better that they would not remain longer in hospital. They cannot be regarded as cured, although a long experience leads me to believe that some at least of them are likely to completely recover in time. Others still remain under observation, and I hope to be able to follow them up and report more fully regarding them at a future date.

Blood examinations showed a considerable increase of the leucocytes in most of the cases which improved, but this did not occur as a rule until after the cessation of the fever, so that it is apparently not a direct effect of the drug, which probably acts on the parasites themselves and is thus specific.

*Complications.*—In three boys cancerum oris developed, two of whom were taken away by their father, and one of them is known to have subsequently died, while the third is still in