Sir James McGrigor – An Appreciation by

Major General A J Shaw CB, CBE, QHP

Director General Army Medical Services

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It is a particular pleasure to have been invited to give this McGrigor Lecture and in doing so to honour with you the memory of a great man who holds a very special place in your history and in that of my Corps. He had a deeply personal regard for your society which he helped found. In his autobiography, published in 1861, he wrote of your society thus: "From the earliest period of the institution of the medical society of Aberdeen, in whatever corner of the globe I was stationed, I never ceased to entertain the warmest interest in its prosperity. I watched its advancement and its success with the anxiety of a parent. By my own subscriptions, donations of books, and continued warm importunities to my numerous friends, I obtained no small proportion of the funds required for the erection of the handsome building which the society now possesses, and which contains its valuable library, museum, etc." He is, of course, referring here to the fine building in King's Street which was your home prior to moving to your new building in 1973.

Why did McGrigor choose medicine and why also the Army? He was born in 1771, the oldest of three sons, of Colquhoun McGrigor, a merchant of Aberdeen. He showed early signs of his future distinction by winning the first prize in the high class at the end of his five years at Aberdeen Grammar School after which he proceeded to Marischal College and in due course took the degree of AM. During his time at the College he began his interest in medicine through a number of friends and associates who were medical students at the Infirmary. He also admits to having his fancy taken by one of the senior students, a Mr Farquhar who was appointed assistant surgeon to a Regiment based in Jamaica and appeared at the Infirmary in full regimentals including a cockaded cocked hat. He met other young men in the military at that time and clearly his two-fold interest was founded from then.

He studied under a Dr French at the County Infirmary, attended classes there for three years, and afterwards attended classes in Edinburgh and in Glasgow. After completing his education, at length he departed by ship for London in 1793 where his earlier interests in the Army were rekindled. He recalls that "The War of the Revolution against France had commenced and I met many friends from Aberdeen, and stimulated by everything around me, I determined on serving as a Medical Officer in the Army".

As a backdrop to examining his achievements it is important to remember the conditions of the age in which he entered the Service. Medical education was of course totally unregulated and the knowledge and capa-

bility of those professing to be surgeons or physicians varied enormously. (A census in 1841 suggested that about 5,000 of the 15,000 people then practicing medicine were unqualified!) Anaesthesia and the microbial theory of disease would not appear until decades after his long life. Infectious disease was endemic and epidemic with huge mortality rates and nowhere more than in the Army, both in barracks and in the field.

George III was on the throne of England, we had but recently lost the American Colonies, and the French Revolution had stirred up widespread republican feelings. McGrigor himself recalls that "when the Revolution broke out it was hailed with joy by no small number of the students in Edinburgh". He brought back with him the contagion of republicanism to Aberdeen where it was warmly advocated particularly in the University. His advocacy of the Revolution caused uneasiness among some of his friends who cautioned him against giving expression of his opinions. He goes on to admit that his opinions were, in no long time, entirely changed after entering the Army.

And so he entered the Army by purchasing a commission in the newly formed 88th Foot, the Coldstream Rangers, in 1793 and there began a military medical career which was to span 58 years. I intend to devote most of this talk to considering McGrigor's achievements as Wellington's principal medical officer in the Peninsula, but let us first see the breadth of military medical experience which he gained before being faced with his greatest challenge.

He served with his Regiment in the Channel Islands and then in the Flanders Campaign of 1793-1794, during which time he narrowly survived two attacks of typhus fever and a fire at sea. Thence, in 1795 he sailed with his Regiment as part of Sir Ralph Abercrombie's expedition to capture the Caribbean islands of St. Lucia and Grenada from the French. During this time he was faced with the ravages of dysentery and yellow fever and remarked the number that died from yellow fever was four times that of those who fell by bullet or bayonet. He writes that he felt a conviction that in many cases the disease was communicated by contagion, although not in its origin a contagious disease. The mortality particularly of officers, was frightful and he describes vividly, "Of the officers quartered at Richmond Hill (Grenada) many came down each morning to St. George's to see their friends in other Corps . . . the first question put to an officer entering the coffee room was: who died since yesterday? And almost always several well-known officers were announced". However he

to which I am reduced in moving the Army from its present quarters, for want of medical assistance, and if unfortunately the troops should be sickly on their march, I do not know what is to become of them". In 1811 he writes, "It is obvious, however that if this system continues much longer, the whole Army will be sick or must disband". What was the problem?

It has been suggested that Wellington suffered from a chronic shortage of surgeons, a defective hospital system, and inaccurate regimental returns on the numbers of sick and wounded – factors which tended to limit the mobility and efficiency of the Army. Certainly the surgeons were for the large part inexperienced, probably not deployed as effectively as they might have been, and not under sufficiently coherent medical control; but the hospital system was compromised from the outset by logistic considerations, or, rather, lack of logistic arrangements.

The accepted policy of treating sick and wounded in the regimental hospitals had to be abandoned when Wellington ordered that bullock-carts carrying their equipment should be withdrawn because they interfered with movement of the Army. This meant that there were no beds in which to treat sick men nearer than the General Hospital and all cases had to be sent to the rear. Only a single cart was retained to carry the sick, and this cart, drawn by oxen and plodding along at two miles per hour with screeching solid wheels, was anything but comfortable for the sick and torture for the wounded.

Sick not carried in this manner were aggregated under the care of a staff surgeon until similar carts were found from the commissariat. Assistant surgeons from each regiment were left behind with them until they were properly handed over, thus reducing the direct medical support available to the fighting battalions.

There were no intermediate medical stations between the regiments and the General Hospitals, no mobile field medical units and no dedicated medical evacuation transport. This situation undoubtedly caused increased mortality, slowed down recovery and thus delayed return to duty and was wasteful in medical resources. By comparison Baron Larrey had introduced the concept of a flying ambulance or ambulance volante into the French Army some years previously. This unit had an establishment of 113 officers and men including 14 surgeons, all mounted and under the command of a Surgeon Major of the First Class. It moved with the Division and rapidly transported wounded to the rear.

And so the medical problem appears to have been a combination of inexperienced and poorly controlled medical staff and lack of logistic resources. As well as the enemy and the climate, the Army was threatened by epidemic and endemic disease. The principle cause of manpower wastage was fever and it was classified at that time into four categories: simple or continued fever, intermittent, remittent, malignant or typhus. Of these fevers two were distinct types – intermittent was

malaria, malignant was typhus. Continued and remittent fevers embraced a multiplicity of diseases which were at that time indistinguishable including typhoid, the paratyphoids, fever associated with dysentery, relapsing fevers both tick and louse-borne and multiple malarial infections. The malarial season was mainly June to September while typhus was prevalent in the winter. Dysentery of course was also more common in summer.

Principles of management can perhaps be better understood by the current opinion of the time that disease was caused by intemperance, exposure, marsh vapour and contagion. Exposure to heat or cold might cause inflammation of the lungs or bowel disease. If exposure was severe and wet, cholera, rheumatism or consumption might result (flannel shirts were considered the remedy). Marsh vapour induced fever and dysentery. Contagion occurred only from uncleanness and lack of ventilation, and it was considered that typhus could occur spontaneously for want of cleanliness, poor food, depression of mind and stagnation of air.

And so when Wellington broke out from the lines of Torres Vedras in early 1811 the medical problems of his troops began again. From April 1811 the sick rate steadily mounted. From thirteen per cent to twenty per cent in May, twenty-four to twenty-six per cent in June and September. Between April and June, numbers of hospitals doubled from 6,160 to 12,392!

Despite this the Battles of Fuentes de Onoro and Albuera were fought and won in May and the British Army was once again across the Spanish border.

By October the Army was in winter quarters, dispersed over Central and Northern Portugal; the sick rate was thirty-two per cent and over 17,000 men were in hospital. Wellington was alarmed and considered that the Army was quite unable to take on any task of magnitude. He wrote home to the Horseguards requesting the Duke of York to send him an Inspector of Hospitals in whose talents and judgements he could place entire confidence. To quote his own words, "I should have the most active and intelligent person that can be found to fill this station". The Duke had no hesitation in sending him McGrigor.

By the turn of the year the British Army was engaged in the investment of Ciudad Rodrigo in the north and Badajoz in the south which were captured in January and March 1812. Throughout the year most of the manoeuvring was to be in Spain culminating in the great Battle of Salamanca in July. The British Army was therefore constantly lengthening its lines of communications from its bases in Portugal.

McGrigor landed in Lisbon in January 1812 and lost no time in inspecting the whole medical service. He wrote that on arrival, "I found an inundation of complaints of the inadequacies of the means which the medical department had for operating the campaign".

After inspecting the hospitals in Lisbon he made three propositions to Wellington. These were:

(1) "As to the large proportion of the Army in hospitals particularly at Lisbon I propose that in future only special cases of either wounds or sickness should be sent to the rear, and such only should be approved by me. In order to effect this, I submitted that each Corps should have a temporary hospital of its own, where all slight cases of disease and wound should be treated by the Regimental Medical Officers, under the superintendence of the Principal Medical Officer of the Division.

2) That all sick and wounded officers of the same description instead of being sent to Lisbon as heretofore should be treated in the same manner.

3) As in future no sick or wounded will be at Lisbon except those that would ultimately be embarked for England; all the medical officers should be ordered up to the Army, excepting the small establishments which I indicated for Lisbon duties.

Finally I gave a statement of the sick I found at Lisbon, proposing that one part of them, officers and men should be sent as inefficient to England, and the remainder ordered to join their Regiments in the field for duty, or to be under the care of the medical officers of their Regiments".

It was quite clear to McGrigor that Lisbon was so very agreeable a residence that many officers and men would be slow to resume their duties in the field, and it was a much more attractive station for the medical officers themselves than in the Divisions of the Army about Ciudad Rodrigo in an inclement season of the year.

Wellington at once saw the advantages of McGrigor's proposals and agreed to them – except where it came to the proposal to hold the sick forward. Again to quote McGrigor, "When I, however, proposed, with the still further view of preventing the accumulation of sick and wounded at the rear (which existed at all the hospital stations), that each Regiment and Brigade should have its own hospital, where all slight cases of disease and wound should in the first instance be accommodated and that conveyance of the hospital establishment should be provided for each Corps and Brigade, he at once exclaimed against it and said he would have no interruption to the movements of the Army, which my plans would clog. On my further explaining he warmly said he would have no vehicles for the Army but for the conveyance of the guns; so that for the time I was obliged to give up my plan, I saw he was very strongly opposed to it. I found however that he had not entirely dismissed it from his mind, for some days afterwards he said that my views were excellent if they had been practicable; because it was lamentable to see so many men slightly ill or wounded sent constantly to the rear, and thus diminishing the force of the Army in a greater proportion than the reinforcements from England were adding to it; but he said, "I cannot risk encumbering the Army and impeding its movements, either in advancing or retiring and for the time the matter was dropped".

McGrigor's proposals to Wellington were of course based on a sound principle which he was enunciating

from the beginning, which was that the primary if not the greatest means of preserving the health of an Army was for the treatment of every case when possible to be carried out within his Corps, and continued at that level for as long as it could be done. "In acute disease everything depends on active treatment being pursued at the very commencement". He also developed other sound principles rapidly after his arrival.

Among many deficiencies he found in medical care of the sick and wounded, he noted two especially outstanding. One was that all kinds of cases, wounds and all manner of infectious diseases were herded together in wards, accounting for the high hospital mortality. Another was that there were no convalescent hospitals. On this he writes as follows, "I established at Coimbra a regulation which I subsequently found of the greatest service in all our hospitals: separate hospitals for care of continued fever, for dysentery, for wounds and ulcers and for convalescence". This segregation of cases was obviously being carried out for the first time and was very much a first for McGrigor. He also established the principle of convalescent depots and the management of the sick and hurt by a system of grading that obtains to this day. Many of us would think, or like to believe, that the system of convalescent depots was a modern development in the care of the sick and wounded in the Army, but once again McGrigor was the pioneer in this. He writes, "At Coimbra I found that relapse of disease was extremely frequent, indeed the hospitals were principally fed by relapse cases from the depot. Men sent from hospitals as recovered, generally returned from the depot in a few days and with severe disease, and it was observed that a large part of the mortality was from relapses. The recovered men sent from the warmer comfortable hospitals to the depot which was a dreadfully cold place where they had only one blanket, and where the duty they had to perform was rather severe. I therefore established a convalescent hospital in a convent, and to this place every convalescent was sent from all the hospitals and remained for two or three weeks".

McGrigor continued to introduce more reforms in the medical service; he improved the diets, the ventilation and the hygienic environments in the hospital; he established hospital boards to review the condition of patients; he promulgated a sanitary code for the Regiments in the field; he began to introduce sprung wagons for the transportation of the wounded and he continually sought to dignify the medical department itself by rewarding and promoting meritorious surgeons.

McGrigor was very conscious of the need to improve the morale of his medical officers and right from the start he made a point of requesting Wellington's assistance in this. When he first reported to Wellington at the siege of Badajoz he requested that Wellington should insert a word of praise into his report concerning the services of Army doctors during the Badajoz Campaign. Wellington hesitated at first, for there was no precedent in the

British Army for siting lowly surgeons in bulletins from the battlefield. "I have finished my despatches", replied Wellington, "but, very well, I will add something about the doctors". The Duke's commendation of the surgeons of Badajoz appeared in the London Gazette, the first time that a field commander publicly praised military doctors for their valour and skill. Wellington's example which he repeated after the battle of Salamanca established a tradition in the Army: henceforth after every major action commanding officers would cite the bravery of their medical officers in battle.

And so McGrigor gradually developed a well controlled and effective medical service. Wellington respected his judgement and supported him. He was particularly impressed with the accurate returns of sick and wounded and of his correct estimates of the number of men who would be fit for combat. He never got the transport which he needed, despite the fact that Wellington accepted the need. After Salamanca in July 1812 in fact he incurred Wellington's fury by ordering up commissariat transport to clear the wounded without prior authorisation, but he finally achieved agreement to a chain of small mobile regimental hospitals for temporarily incapacitated troops, the forerunners of the Second World War Field Dressing Stations. In the autumn of 1812 he had problems with housing up to 4,000 convalescents in winter quarters and he obtained Wellington's support in obtaining from England prefabricated buildings in which to house them.

The interesting point to make is that during this period of 1812-1813 the sick rates did not fall but return to duty improved. Indeed in May 1812 the sick rate was 29.9%, it fell through June to 25% and in July to 24% but rose again sharply in August to 34.7% and 35% in September. In the three months June to September hospital admissions numbered 55,346, a total greater than the whole strength of the Army! Obviously the majority were slight cases treated locally and returned to duty quickly because the Army was marching and fighting throughout this period.

On the tables of admissions it is of interest to note that admissions to general hospitals were halved between 1812 and 1813 (Table 1) although mortality rates were not so greatly reduced and were in fact a higher percentage of those admitted. Also note the huge admission rates of patients with continued and intermittent fever into regimental hospitals, but the relatively small death rate from intermittent compared with continued fever (Table 2 & 3).

Through 1812 and early 1813 McGrigor continued to augment the regimental hospitals, reducing the flow-back into general hospitals and with it the morbidity and mortality of evacuation, and the incidence of typhus and other infectious diseases in the rear hospitals. As a result there were more men with the colours than ever before and it is estimated that the change in medical policy added the equivalent of a division of fighting troops to the Army by the time the battle of Vittoria was fought in

June 1813. By the time Wellington reached southern France he remarked "during the five years that I have commanded the Army I have never known it so healthy".

At the conclusion of the war against Napoleon, Wellington wrote, "I have every reason to be satisfied with the manner in which Mr McGrigor has conducted

Table 1

**British Army in the Peninsula
General Hospital Admissions and Deaths**

	Admitted	Died
1812	95,075	6,931
1813	46,715	5,267
Dec. 1813- June 1814	22,013	2,474
Regimental Hospitals		
1812- June 1814	176,067	3,841

Table 2

**British Army in the Peninsula Regimental Hospitals
December 1812-June 1814
Principal Causes of Admission**

Continued Fever	40,224
Intermittent Fever	22,914
Dysentery	7,526
Rheumatism	4,933
Pneumonia	4,027
Remittent Fever	3,961
Typhus	1,795

Table 3

**British Army in the Peninsula
Regimental Hospitals**

Principle Causes of Death	Dec 1811-Jun 1814
Continued Fever	1504
Typhus	551
Wounds	505
Dysentery	431
Pneumonia	137
Various	104
Phthisis Pulmonalis	90
Diarrhoea	86
Remittent Fever	66
Intermittent Fever	59
Enteritis	29
Hepatitis	23

McGrigor held with great distinction for 36 years until his retirement in 1851.

During this time he developed policies to set right deficiencies which he had experienced in his long years on active service. He recognised that military medicine, surgery and hygiene were specialist subjects in themselves and arranged for newly joined medical officers to receive instruction in these subjects at Fort Pitt, Chatham, where he also established a medical museum and library. This was the fore-runner of his long-term aim which was an Army Medical School. Financial stringency after the Napoleonic Wars prevented such development and it was only after the catastrophe of the Crimea that his dream was realised. However he insisted on raising the professional standards of entry for doctors into the Army and he demanded of these doctors accurate medical returns, not merely as heretofore to account for the costs of medical treatments and diets which they had prescribed, but to encourage them to accurate clinical observation and to provide data on which the health of the Army could be assessed and measures taken to improve it, particular stress being given to barrack hygiene, food, exercise and clothing, as well as conditions in the field.

He maintained a special concern for the well-being of medical officers and their families and he instituted both the Army Medical Officers Benevolent Society and the Widow's Friendly Society which continue today as Corps Charities. In so many ways he was the founder of the Royal Army Medical Corps as we know it today.

He retired full of honours – a Baronetcy in 1837, KCB in 1850. His military honours included the medals of the Imperial Ottoman Order of the Crescent conferred by the Sultan of Turkey, and the Portuguese Order of the Ancient and Most Noble Order of the Tower and Sword for his services in the Peninsula. Knighthood of Guelph, a Hannoverian Order, was conferred on him after Waterloo. His academic distinctions included Fellow of the Royal Society 1816, and Fellow of the Royal Society of Edinburgh LLD Edinburgh, FRCP (London and Edinburgh), both Edinburgh and Aberdeen conferred on him the Freedom of their Cities and Aberdeen thrice selected him as Rector of the University. He was Honorary Physician to George IV, William IV and Queen Victoria. It is said that when 75 years of age he asked leave to retire but the Duke of Wellington replied, “No, no, Mac, there is plenty of work in you yet”. Now in his 82nd year he felt it was high time to make way for a younger man. As befitted his long and distinguished career his retirement did not pass unnoticed by the Government, and in the Army estimates for 1851 it was stated: “In the Army Medical Department, the Service lost by the retirement, not, I am happy to say, by the death of Sir James McGrigor, an officer to whom the public is much indebted”. And the Lords of the Treasury in fixing his pension expressed their high approbation of his, “long, able and most meritorious services”.

In recognition of the part he played in the Peninsular War he was knighted in 1815 and in that year became Director General of the Army Medical Department. The Medical Board of Physician General, Surgeon General and Inspector General of Regimental Hospitals had recently, for good reason, been reorganised with the appointment of a Director General and this post

He made London his home after his retirement and we are told, "the urbanity of his manners, the benevolence of his disposition and the simplicity of his heart drew around him for the remaining years of his eventful life a large circle of friends". He died on the 2nd April 1858 in his 88th year and was buried in Kensal Green Cemetery.

There are several permanent memorials in his honour. In 1865 a statue was erected in the grounds of the Royal Hospital Chelsea and now stands in the forecourt of the Royal Army Medical College at Millbank. Subscribers to this included the Duke of Cambridge who was then Commander in Chief, 14 generals and many other combatant officers. In your city a stone obelisk in Duthie Park also commemorates his outstanding services. When Wellington College was founded McGrigor was assigned one of the niches reserved for the reception of statues or busts of the principal officers, the contemporary statesmen and the personal friends of the Duke. In our Headquarter Mess

hangs his portrait by Sir David Wilkie. One of the highest tributes in which McGrigor would have rejoiced was the statement that "he rendered the most effective service to his country by appointing to the Army gentlemen of high professional attainments".

It has been a very great pleasure, a privilege and an honour to pay tribute to the memory of an outstanding Army doctor and a great Aberdonian.

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PRINT OF HM QUEEN ELIZABETH THE QUEEN MOTHER

The Royal Army Medical Corps have recently had permission to make a print of a painting of Her Majesty Queen Elizabeth, The Queen Mother, Colonel in Chief Royal Army Medical Corps.

Copies of this print are available at a cost of £15 each from Regimental Headquarters RAMC, Keogh Barracks, Ash Vale, Nr Aldershot, Hants GU12 5RQ. Cheques should be made payable to RAMC Corps Mess Funds.