The situation in the Bombay Presidency had been firmly and skilfully handled. The Bombay sepoys as a whole remained loyal and did good service in the suppression of the rebellion. On December 18, 1857, a force of 6,000, consisting of European and Bombay troops with a part of the Hyderabad contingent, was assembled at Mhow, with the general idea of the restoration of order in Central India. The campaign which followed, involving a long-sustained effort, a march of a thousand miles with constant fighting under the most distressing conditions of heat, fatigue and privation, is considered by Sir John Fortescue as the most remarkable achievement in the Indian Mutiny. Sir Hugh Rose, the commander, had no previous experience of Indian warfare, but he instilled new life into the operations. Transport, in which camels were largely employed, was reorganized. Baggage, though still excessive according to modern ideas, was much cut down. Attention was paid to clothing. The 3rd Bombay Fusiliers (2nd Leinsters) received a loose "stone-coloured" blouse and trousers and pagri of the same colour. The 71st, who joined in May, are described as wearing a loose khaki-coloured blouse and overalls, with a light shako-like hat provided with a heavily-padded curtain reaching behind nearly to the waist. A light red serge was introduced in 1859.

On January 6, Sir Hugh Rose marched out of Mhow, and, on the 28th, had occupied Saugor. Surgeon Lowe of the Madras Sappers and Miners, who wrote a history of the campaign, records an incident which occurred here showing how slow the old Indian army officers were to absorb new ideas. A sepoy was courtmartialed for alleged looting, and sentenced to be flogged and branded. A parade was ordered, and the Brigadier asked the medical officer in attendance if he had come prepared to carry out the second part of the sentence. The M.O. replied that the art and science of branding formed no part of his professional education, and proceeded to...

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1 14th Light Dragoons, 86th Foot, 3rd Bombay Europeans (2nd Leinsters), 8th Field Battery R.A., 21st Co. R.E., 3rd Bombay Cavalry, two batteries and one horse battery of the H.E.I.C., 25th Bombay Infantry, Madras and Bombay Sappers, detachment Hyderabad Contingent.
prove by regulations that it was no part of his duty. As no one else was competent to perform the operation, this part of the punishment had to be omitted.\footnote{Whether or not branding was ever carried out by medical officers, there was an order still in force about this period that cupping, if performed on a patient, should be done in such a way as to leave cross scars, thus affording a means of identification (Sir A. F. Bradshaw, C.J., vol. xI, p. 146).} On February 9 the rebel stronghold of Garhakot, twenty-five miles to the east, was captured, and on March 3 the territory of the Rajah of Shahghar was annexed to the Crown. There was a brush with the enemy on this date in the Madanpur Pass.

In his despatch referring to this engagement, Sir Hugh mentioned his staff surgeon, James Vaughan of the Bombay establishment, who, “on account of paucity of officers, gallantly led a party of Hyderabad Infantry who cleared a difficult position of the enemy.” The area of operations included the great tableland of Malwa, a highly-cultivated country with rich, black soil varied with small conical and flat-topped hills and low ridges watered by many rivers draining into the Jumna on the north and the Narbada with its tributaries on the south. A large part was covered with forests, especially the hilly regions. On March 20 the force was within fifteen miles of Jhansi where, in June, 1857, sixty-six British of all ages and sexes had been massacred after evacuating on terms the post in which they had defended themselves.\footnote{The men were tied in a long line between some trees and their heads struck off. The ladies who had children were compelled to see them cut in half before their turn came. Dr. McEgan of the 12th N.I. and his wife were among the victims.} The town, which was strongly fortified, was invested, and on April 1 an army under Tantia Topi was successfully engaged and dispersed with a loss to ourselves of 17 killed and 63 wounded. On April 3, with a further loss of 42 killed and 211 wounded, Jhansi was stormed. There were three casualties among the medical officers; Surgeon Thomas Stack of the 86th was shot through the heart when accompanying the stormers, Assistant Surgeon Miller of the 3rd Europeans and J. Cruickshank of the R.E. were wounded. Surgeons F. S. Arnott and J. Vaughan, both of the Company’s service, received mentions. A depot hospital was established here in charge of the Field Surgeon, who was left, with one assistant, in charge of 300 sick.

Owing to the increasing heat, marches could now only be performed at night. The dust was several inches thick on the roads, and the further the column went the scarcer became the water, which was now found only in small round wells at a great depth and was lukewarm and brackish. Many of the soldiers, who slept through the time the sun shone, never woke again and were found dead. The next important engagement was at Kunch on May 6. We had 9 killed and 47 wounded, but, in making the flank march to turn the position, there were 46 cases of sunstroke, 14 of them fatal. The temperature rose to 115° in the shade, there was a marvellous mirage, the flat plain appearing as a lake of water, trees and all figures
acquiring gigantic proportions. While the action was going on, dooly after dooly was brought into the field hospital with officers and men from the front, some dead, others prostrated, some laughing and sobbing in delirium. Eleven were thus killed outright. Four times had Sir Hugh Rose to dismount, unable to remain in the saddle under the blazing sun. From time to time his doctor poured water over him, gave him restoratives, and set him on his horse again."

On the 10th Rose continued his march, being in constant touch with parties of the enemy, whose tactics were to disorganize and prostrate their opponents by continued exposure to the sun. The complete collapse of one of the two brigades necessitated a halt of three days. On May 21 he reached the vicinity of Kalpi, which the rebels held in strength, where he was joined by a camel corps made up of four companies of the Rifle Brigade, and the 88th, with the same number of Sikhs. On the following day the enemy was engaged, routed, and severely punished, our casualties being 24 killed and 43 wounded, with fully as many laid out by the sun. A detachment was sent in pursuit, but the limit of human endurance had been reached. Bundelkand and Rajputana had meantime been cleared by independent columns under Generals Whitlock and Roberts, and Rose's work appeared completed. The latter was himself in hospital with his fifth sunstroke, and his chief staff officer was raving in delirium. The troops halted, and the sick were sent into Cawnpore.

But there was still work to be done. Tantia Topi, after his defeat at Kalpi, with the Rani of Jhansi, made for Gwalior. Here Scindia was loyal, but his army deserted him in the field, and the fortress was captured. On receipt of the news, Sir Hugh at once marched and, fighting two actions on the way, arrived before the city on June 19, which he took by assault. The battle casualties of the Central India Field Force between January 31 and May 22 amounted to 112 killed and 433 wounded. In the Gwalior campaign, June 6 to 19, there were 22 killed and 62 wounded.

By this time there were 96,000 British troops in India, and the medical staff had correspondingly increased. The Army List for 1857 shows, apart from the regimental surgeons, an Inspector of British Hospitals in Bengal and a Deputy Inspector in Bombay. In 1858 there appear a second Inspector in Calcutta, 11 Staff Surgeons, First Class, and 32 Second Class. Some of these became P.M.O.'s of independent columns.

After the capture of Lucknow the pacification of Oude and Rohilkund was proceeded with. Organized resistance came to an end in June, when opportunity was taken to afford the troops some respite from the heat. In an engagement fought by Sir Hope Grant at Nawabganj on June 13, his brigade of 3,500 had 67 battle casualties, in addition to which 33 were killed by the sun, and 250 went to hospital from the same cause.

1 Whitton, "History of the Royal Canadians." The 71st, who had the eleven deaths, had just joined the force from Malta.
The following medical officers served with European regiments in Central India between January 1 and June 30, 1858:—

8th Hussars, Surgeon A. P. Lockwood, Assistant Surgeons H. Sherlock, T. Rudd; 12th Lancers, Surgeon A. Barclay (43rd), S.M.O. Saugor Field Force, Assistant Surgeons E. M. Wrench, S. Gibson, D. C. Wadsworth; 14th Light Dragoons, Surgeon Archibald Stewart, Assistant Surgeons R. C. Lofthouse, S. Skipton; Royal Engineers, Assistant Surgeon A. Cruikshank (wounded); Royal Artillery, Assistant Surgeon T. J. Orton; 71st (1st Highland Light Infantry), Surgeon E. Wilson, Assistant Surgeons W. Simpson, W. Leach; 83rd (1st Royal Ulster Rifles), Assistant Surgeon H. C. Miles; 86th (2nd Royal Ulster Rifles), Surgeon T. Stack (killed), Assistant Surgeons T. S. Barry, C. H. Browne; 95th (2nd Sherwood Foresters), Surgeon John Ewing, Assistant Surgeon John Clarke; 3rd Bombay Europeans (2nd Leinsters), Assistant Surgeons Miller (wounded) and Brown, Gwalior Contingent attached. Assistant Surgeons W. H. Harris and James Good (43rd) also served in this campaign.

The following medical officers of the Hon. East India Company's service were mentioned in despatches: Surgeon F. Arnott, superintending surgeon, and James Vaughan, staff surgeon, with Sir Hugh Rose's force, J. H. Orr, W. Mackenzie, D. Ritchie (field surgeon), J. Deas, G. Nayler, W. G. Davidson, superintending surgeon, and Macfarlane, field surgeon, Saugor Field Force, W. G. Bradley. Two medical officers, J. H. Sylvester and Thomas Lowe, wrote accounts of the campaign.

Colonel Neill has gone down to posterity as one of the greatest exponents of "the decisive force of offensive action" in dealing with natives, of which some of the other commanders during the Mutiny showed a noticeable absence of appreciation. A blind application of this principle without invincible determination to carry it through led others to disaster. In April, 1858, as the result of Sir Colin's operations in Oude, a rebel leader; Roer Singh, was driven in the direction of Arrah in the Patna district, which then held a small garrison of 150 men, H.M. 35th, 50 seamen and 150 of Rattray's Sikhs. Whereupon the officer in command determined to attack. Marching towards Jagdespur, the column entered the jungle, where it was ambushed by the concealed enemy. The men were full of confidence, and were already formed for a charge which might have saved the situation, when their leader hesitated, a bugle sounded the retire, and a general action continued for an hour during which the enemy was continually reinforced. Orders were then given to withdraw. One of those present wrote: "We began our retreat in a most orderly manner, till we reached a tank in the open plain where soldiers, sailors, Sikhs and followers began swallowing stagnant water, as they could get no better and were fainting with thirst, when a cry was raised that the cavalry was thundering

1 These were mentioned in despatches.
down on us; but no one would rise till Dr. Clarke of the 35th, running forward, drew his sword and called on the men to form a square round him. A sort of one was formed and a volley discharged, which soon made the horsemen turn about. After this every man had his own way; no commands were listened to; the men were raving wild; the European portion of the force were falling from apoplexy by sections, and no aid could be administered, as the medical stores were captured and the dhooly-bearers had fled. There were sixteen elephants, but they carried the wounded, so they were left behind to be cut to pieces. Captain Le Grand was shot through the chest and died; Lieutenant Massey and poor Dr. Clarke, both of the 35th, fell from apoplexy and were left to the mercy of the enemy."1 Out of 200 Europeans who started eighty reached home.

In the autumn of 1858 the Commander-in-Chief again took the field. The pursuit of Tantia Topi continued till April, 1859, when he was run to earth, brought to trial, and hanged.

There seems to have been no lack of appreciation, either on the part of the Government or of the public, of the conduct of the officers of the two Medical Services during the Mutiny. Lord Clyde, in his despatch dated at Lucknow, February 21, 1859, stated that the Medical Department, "being composed of officers belonging to the two services, has shone equally in the matters of general organization and of regimental arrangements. The Director-General, Dr. Forsyth, and the Inspector-General of Her Majesty’s Hospitals, Dr. Linton, C.B., in Calcutta, have worked successfully to meet the general requirements made on them, and the staff and regimental officers have well maintained the credit of their noble profession and the reputation for self-sacrifice which belongs to the surgeons of Her Majesty’s armies—a reputation which is maintained in the field on all occasions, as well as in the most trying circumstances of the hospital."

Several promotions to the rank of Deputy Inspector-General were made in December, 1858. The C.B. was bestowed on J. C. G. Tice, who had been Inspector of Hospitals in Rohilcund; F. W. Innes, who had been Havelock’s Principal Medical Officer; John Fraser (Rifle Brigade), Principal Medical Officer to Sir Hope Grant in Oude; C. A. Gordon (10th), Senior Medical Officer to General Frank’s force in the capture of Lucknow; J. G. Inglis (64th), and Joseph Jee, V.C. (78th). The officers of the Indian Medical Department who received the order were: Superintending Surgeon E. Tritton, for Delhi; J. C. Browne (Bengal H.A.), Colin Campbell’s Superintending Surgeon in the operations at Lucknow, John Campbell, Ogilvie, and W. Brydon, of the garrison; F. S. Arnott, J. H. Orr, and W. Mackenzie, for Central India. Inspector-General William Linton received the K.C.B. in 1865 for his services as P.M.O., India. Inspector-General John McAndrew, retired in the second year of the Mutiny, also

1 Charles Ball, “History of the Indian Mutiny.” The medical officer referred to was Assistant Surgeon William G. Clarke.
received the K.C.B. and terminated his long and honourable career five years later.

The duties which the surgeons were called upon to perform, or assumed from a sense of duty, in these three strenuous years were many and various. Surgeon S. H. Batson, of the 74th, N.I., one of the survivors of the European military population assembled on the Ridge, at Delhi, on May 11 1857, undertook to obtain help from Meerut. He disguised himself as a Mussalman, but was betrayed by the colour of his eyes. He was fired on, but escaped to a village, where he was stripped naked and robbed, reaching safety a month later after hiding in the jungle. At Patna Dr. R. Lyell, of the Company's service, was killed leading a party of police to restore order in the city. Dr. Watson, Civil Surgeon at Mynpurie, who with a few other officials remained after the senior civilian had fled, is mentioned as having done invaluable service in restoring confidence among the loyal natives and preserving the treasure. At the fight at Badli-ki-Serai Assistant Surgeon Whylock, of the 75th, was compelled to kill two of the enemy in order to save a soldier's life. Fayrer and Partridge formed part of the combatant garrison of one of the posts at Lucknow, and did some hard fighting. In the first relief, Assistant Surgeon McMaster, of the 90th, took over the colours and helped to lead an attack after the colour-party had been shot down; Surgeon Reade, of the 61st, was one of the first up the breach at Delhi, and spiked a gun. In a night attack by the rebels on the sanatorium of Mount Abu, Assistant Surgeon Edward Touch, 83rd, led his convalescent patients in a counter attack in which the enemy was driven down the hill. Assistant Surgeon J. J. Halls was one of the fifteen Europeans who with a detachment of Sikhs held out at Arab rather than desert their post. Surgeon Vaughan's assumption of military command in the Madenpur Pass is paralleled by the performance of J. T. C. Ross, an Indian cavalry surgeon, who was placed in command of a troop by Sir Hope Grant in the advance on Fateghar. Lord Roberts stated that he handled his command in the charge as well as any cavalry officer could have done.

Sir Colin Campbell, in his eulogy of the officers of the Covenanted Service, might well have added a word for the Subordinate Medical Department, to whose devotion to duty many officers bore witness. Sir A. D. Home, in his Reminiscences, mentions Mr. Hurst, of the I.S.M.D., who was instrumental in saving some of the helpless patients during Havelock's progress into Lucknow. Of the Indian sub-assistant surgeons on the Bengal establishment a large proportion were constrained to join the rebel army. Colonel Crawford, in his "History of the Indian Medical Service," mentions two by name, Chamman Lall, of the civil hospital at Delhi, a Christian, murdered by the mutineers, and Wazir Khan, teacher of materia medica in the Agra Medical School, who took a prominent part against us.

Whether any of the Medical Staff Corps who embarked for China in
1857 were diverted to India with the remainder of the troops is not clear, as there seems no account of their activities. In 1860 there were thirty-one in Bengal, but they all went home that year.¹

There was severe fighting round Delhi, and the losses in Havelock's column at Lucknow amounted to seventeen per cent, but otherwise battle casualties on the whole were not heavy. The wastage from sickness was reckoned enormous by those to whom a hospital admission rate of 2,000 per 1,000 per annum was not unfamiliar.² In the A.M.D. report on the Tirah campaign of a later date, the Mutiny hospital admissions are stated in one year to have been three to one, and the death-rate just under nine per cent. According to the figures given, at least 5½ per cent of those engaged went to hospital with heat-stroke. Sir Colin Campbell was sparing of his men in action. It seems agreed that had greater enterprise been shown in pressing the rebels after their defeat at Lucknow, much of the mortality which resulted from heat-apoplexy, fever, and exhaustion in the long drawn out operations that resulted could have been avoided.

The deaths of 3 British Service medical officers in action have been mentioned. At least 4 others died of disease, the direct result of service. Of the Company's officers, 3 were killed in action, 9 at Cawnpore, 16 others were murdered or died in the jungle from exhaustion or exposure, 10 others died of disease.

While presenting a brief summary of the more important features of the Mutiny campaign so far as they affected the Medical Services, no attempt has been made to deal with the bewildering series of subsidiary operations, though they involved no less fortitude and devotion than the more spectacular ones. In many of these cholera, dysentery, fever and heat exhaustion proved as formidable adversaries as the rebel forces. That in these circumstances the medical officers as a whole succeeded in living up to the motto later adopted by the Corps there is every evidence to show.

¹ Colonel F. Smith, "Short History of the R.A.M.C."
² Some mortality figures can be gleaned from the regimental histories. The 78th, who were in Havelock's force, lost 217 men between July and December, 1857; of these 114 were killed and 103 died. The King's Regiment had 41 men killed at Delhi and lost 202 others, practically all from disease, during the campaign. The 2nd Rifle Brigade lost 132 from disease in twenty months, the 90th 312 all told, and the 79th 158. The 93rd lost 87 from wounds and 84 from sickness.