Some Account of the British Military Hospitals of World War I at Etaples, in the orbit of Sir Almroth Wright.

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SUMMARY: A group of British Military Hospitals was established between 1915 and 1918 along the estuary of the River Canche on the northern French coast. Their positions, now obliterated, can be identified from a plan of the time. With the growing realisation of the importance of bacteriology in the treatment of wound infection, the laboratory of Sir Almroth Wright in neighbouring Boulogne-sur-mer had a strong local influence.

Introduction

The German army invaded Belgium on the 4th of August 1914 and by the autumn was approaching the English Channel. With the first Battle of Ypres in October in which there were nearly 100,000 British casualties, the French port of Boulogne-sur-mer was transformed into an important British military hospital base (1) and by degrees numbers of hospitals were set up in the surrounding country, notably at Etaples and Camiers, along the estuary of the River Canche some 15 miles SW of Boulogne. Three of the Etaples hospitals have left records of their histories, one Imperial Service Hospital, the No.26 General (2), and two lavishly equipped Voluntary Hospitals, the No.6 BRCS, or Liverpool Merchants’, Hospital (3,4) and the St John Ambulance Brigade Hospital (5,6).

The importance assigned to bacteriology

The War of 1914-1918 was marked by growing emphasis on pathological investigation of wound infection and the hospitals at Etaples, particularly the St John Ambulance Brigade Hospital, were well aware that the celebrated bacteriologist, Sir Almroth Wright, was at the 13th General Hospital in the Casino in Boulogne. The importance of bacteriology was clear to the War Office from the beginning of the war, when on 3 October 1914 it appointed Colonel Sir William Leishman as ‘Advisor in Pathology’ attached to the Director of Medical Services of the British Expeditionary Force (7). Leishman’s task was to recruit personnel and to superintend the work of the hospital laboratories; however, Wright’s laboratory was not under his control (8). Wright had come to France with the British Expeditionary Force at the direct suggestion of Lieutenant General Sir Alfred Keogh, Director General of the Army Medical Services at the War Office. Lord Kitchener had been strongly against having any bacteriologists – ‘They are no good’ –, so he had come out as a Consultant Physician (9). His staff included Alexander Fleming, later to discover penicillin, Leonard Colebrook, remembered for his work on streptococcal infections, John Freeman and Parry Morgan, all previously assistants in his Vaccine Department at St Mary’s Hospital in London (10). The American neurosurgeon, Harvey Cushing, who came to France with the Harvard Voluntary Medical Unit in 1917, was constantly present (11). The Harvard Unit had initially been allocated part of a hospital in Camiers but, because the hospital had had problems with drainage due to the lie of the land, the Unit was subsequently invited to replace the British staff at No. 13 General Hospital in the Boulogne Casino where Wright’s laboratory was situated (12). The Danish bacteriologist, Georges Dreyer, was gazetted honorary Captain in the RAMC to enable him to join a neighbouring hospital to supplement Wright’s investigations into typhoid vaccination by the addition of vaccines against paratyphoids A and B (13).

The wartime achievements of Sir Almroth Wright

Sir Almroth Wright is known to have regarded the development of bacterial vaccines as his most important wartime work (14), but looking back, it can be argued that his greatest achievements really lay in the stimulus he gave to wartime bacteriology and in his efforts to make the War Office improve the organisation of medical services in France. Statistical analysis of Wright’s method of immunisation against typhoid fever by the injection of killed suspensions of typhoid bacilli showed that it was far less effective than he assumed (15) and his faith in ‘therapeutic vaccination’ (treatment of established infections by injection of killed suspensions of the bacterial strain isolated from the patient) was quite unjustified. However, with the help of the simple experimental techniques he had earlier devised (16), whose economy in the use of materials was so well suited to a wartime laboratory, he conveyed clearly and unremittingly to others an understanding of the essential nature of war wounds, infected from the outset by every sort of microbe driven in by the projectile. ‘We are wont to classify the patients in our military hospitals into sick and wounded. In reality, all, or nearly all, are suffering from bacterial infections’ (17). He was repeatedly to stress that a wounded man under a lengthy treatment should not be ‘hustled’ to a hospital in England (18), because the base hospitals in France were rarely full; the opinions of the medical man should be followed instead of those of the hospital administrator; methods of
Fig 1. Location of the Military Hospitals at Etaples in 1917, from a plan of military establishments prepared by the CRE of Etaples District (kindly provided by the Western Front Association). The scale is taken from Carte Topographique No. 2105 Est of the Institut Géographique National de France, revised 1980. Although there has been much building on the northern side of the village of Etaples, and the crossroads at the 'Brick Bridge' has been modified, the area where the hospitals were situated remains mostly scrub land. Neither a Carte Topographique of the same series of 1929, nor an aerial photograph of the area, scale 1:5000 taken in 1947, and kindly provided by the Photothèque National, Institut Géographique National de France, show any remnants of the hospitals. The photograph merely shows numerous shell-holes presumably from the war of 1939-45.
treatment should be standardised under advice from a medical intelligence department staffed by scientists (9); and medical officers should be given organised instruction, since most had been recruited from civilian life and were therefore faced with unfamiliar problems. The ultimate arrangements in France (19) did largely conform to what Wright advocated although his advice was by no means always gratefully acknowledged (18). The inexperience of the medical officers was to some extent compensated for by the existence of medical societies, of which the Boulogne Medical Society (11) was one and the Etaples Medical Society another (20).

### Table 1

<table>
<thead>
<tr>
<th>No.</th>
<th>Hospital Name</th>
<th>Date of Establishment</th>
<th>Date of Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No. 24 General Hospital</td>
<td>21 June 1915</td>
<td>4 November 1919</td>
</tr>
<tr>
<td>2.</td>
<td>No. 46 Stationary Hospital</td>
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<tr>
<td>3.</td>
<td>No. 26 General Hospital</td>
<td>21 June 1915</td>
<td>17 July 1919</td>
</tr>
<tr>
<td>4.</td>
<td>No. 23 General Hospital</td>
<td>June 1915</td>
<td>15 November 1916</td>
</tr>
<tr>
<td>5.</td>
<td>No. 6 BRCS, or Liverpool Merchants’ Hospital</td>
<td>4 July 1915</td>
<td>1 June 1918</td>
</tr>
<tr>
<td>6.</td>
<td>St John Ambulance Brigade Hospital</td>
<td>22 July 1915</td>
<td>31 May 1918</td>
</tr>
<tr>
<td>7.</td>
<td>No. 51 General Hospital</td>
<td>10 August 1915</td>
<td>29 June 1918</td>
</tr>
<tr>
<td>8.</td>
<td>No. 1 Canadian General</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>No. 56 General Hospital</td>
<td>23 May 1917</td>
<td>26 April 1919</td>
</tr>
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</table>

The St John Ambulance Brigade Hospital (5,6), was 'considered by all who knew it to be the best designed and equipped military hospital in France' (5). It was established through an arrangement with the War Office on 2 March 1915 by which the order of St John was to supply, equip and maintain a Base Huted Hospital on land which the War Office would provide. The War Office was also to provide rations, hospital clothing, and clothing on discharge if the patient’s original uniform was not fit to be used. With 520 beds, it was the largest of the voluntary hospitals serving with the British Expeditionary Force in France (1). There were 17 medical and surgical

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The hospitals

The British Base Hospitals at Etaples (Table 1) were established from June 1915 along the road and railway line bordering the estuary of the River Canche (1,9,21,22,23). A railway siding at Etaples could accommodate two ambulance trains either arriving with wounded from the front or leaving for Boulogne with hospital patients to be evacuated to England (1). The sites where the hospitals stood are known from a plan of 1917 (Fig 1), but nowadays all traces of their presence are obliterated and the only surviving reminder of the war is the British Military Cemetery, one of the great war monuments of Sir Edwin Lutyens.
officers, one dental surgeon, 55 nurses, 23 VADs and 141 orderlies. The Commanding Officer was paid by the War Office, the remaining staff, recruited by the Commanding Officer, were paid by the St John Ambulance Brigade. The hospital had 16 wards of 30, and 2 wards of 20 beds, in specially commissioned huts (27) arranged in two lines on either side of the administrative offices and connected by covered ways. Although cameras were initially forbidden, permission was given for a firm of commercial photographers to record its much admired architectural aspects. Its high degree of efficiency was considered to be due to its having a permanent staff. On the other hand, since it admitted only severely wounded cases, the death rate was high (19). It had its own oil-fired electricity generator, and plants for making ice and soda water. There were two operating theatres and an anaesthetic room, an X-ray department where almost half the wounded men were X-rayed on admission using a technique developed to show the position of foreign bodies in three dimensions (20), an electro-cardiograph (the only one in France at the time), and a pathological laboratory frequently visited by members of Wright’s laboratory in Boulogne. Visits from Colebrook were especially welcome (Personal communication from the author’s father, John McCloy: Who Was Who, 1940-1950).

Opposing views on wound disinfection

Wright and his followers advocated a ‘physiological method’ of wound treatment, in which the wound was irrigated with a hypertonic salt solution to encourage the release of fluid ‘charged with phagocytes’ (17). By 1916, Wright had begun a vigorous campaign against the use of antiseptics, which according to him would kill not only the bacteria but also these phagocytes. Experiments in his Boulogne laboratory, which seem initially to have been mainly concerned with production of serum agglutinins after vaccination, had moved on by then to examining the efficiency of antiseptics in the presence of serum (28).

Wright’s antagonism towards the use of antiseptics excited considerable controversy (29) and, of the Etaples hospitals, No.26 General Hospital, in particular, did not share his belief in the ‘physiological method’ of wound treatment. A ward of No.26 General Hospital had been allocated to Surgeon-General Sir George Makins, with 2 surgeons and a bacteriologist, for study of treatment by the so-called ‘Carrel-Dakin Method’ (2,19), a method consisting of insertion of drainage tubes and irrigation with buffered hypochlorite, or ‘Dakin’s solution’ (30). In June 1917, a special ‘Observation Hut’, consisting of 2 wards, an operating theatre and a pathological laboratory, was also set up in Etaples under Makins to compare treatment of severe wounds by Carrel-Dakin, Bipp, Dichloramine T, Flavine and simple aseptic methods. Clinical trials suggested that the Carrel-Dakin method was the best (1). But this conclusion was said to have been later abandoned (11).

The end of the Etaples hospitals

The Etaples hospitals were destroyed by German air raids which began on 19 May 1918 and continued until 10 August. There were grave doubts as to the wisdom of having sited large military training camps and hospitals so close together (21,26,31,32) but it was generally believed that the enemy’s target was really the railway bridge over the River Canche. This belief was confirmed when a German airman who had been shot down said to his rescuers ‘if you persist in placing hospitals beside railway lines, they will continue to be bombed’ (33). In the first attack of 19 May, in which 10 or 12 German planes took part, more than 300 patients were killed or wounded and incendiary bombs were dropped on the town of Etaples (33). Further raids occurred on 27 and 31 May, 28, 29 and 31 June, 1, 25 and 31 July, and 10 August (34). The hospital gardens were dug up for shelters (26). In the raids of 31 May, the St John Hospital was rendered uninhabitable with serious loss of life (6). On 29 June No.51 Hospital was bombed (34). The Liverpool Merchant’s Hospital received no direct hit but nevertheless, decided not to carry on and left Etaples for Trouville on 1 June 1918 (3,4).

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