THE MIDDLE EAST CHEST UNIT

BY

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The history of the Middle East Chest Unit is worthy of record for a double reason: first, because it is the story of a unique and successful venture in military medicine, the benefits of which were reflected not only on the soldier serving overseas, but also upon the civilian patient and the chest hospitals at home; secondly, because the experience gained will prove of lasting value from both the clinical and administrative viewpoint.

The Unit was established in May 1943, at the 16th General Hospital, Jerusalem. Occupying the palace built by the Kaiser on Mount Scopus, the situation was idyllic, overlooking the Holy City to the West, and Eastwards commanding an uninterrupted view across the Wilderness of Judæa to the Dead Sea and the mountains of Transjordania. The hospital was 2,640 feet above sea-level, and the climatic conditions were ideal for a sanatorium, as neither temperature nor humidity tended to be extreme. True, the winter could be bitterly cold and wet, but this was a drawback for the staff rather than for the patients.

In this site, the 16th General Hospital, later known as the British Military Hospital, Jerusalem, acted as the Middle East Chest Centre until July 1947, when the remaining patients were evacuated to U.K., a total existence of just over four years. During this period the hospital also dealt with the routine medicine and surgery from the area but, in the later days, a progressive shortage of staff limited the general work to short-term medicine and emergency surgery, all other cases being transferred to the 12th General Hospital at Bir Ya'cov. The operative procedures required for the chest patients were normally carried out by the Surgical Division of the hospital. However, in the early days of 1944, the No. 1 Surgical Chest Team was attached. This Team carried out its work as a theoretically independent unit until its disbandment on May 5, 1946, when the members of the team were assimilated on the hospital staff.

Staffed by specialist chest physicians and surgeons, the Centre treated all long-term or serious thoracic diseases arising in the British Forces in the Middle East, including the Palestine Police. There was, however, an additional commitment, as non-British patients requiring thoracic surgery were trans-
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ferred to Jerusalem from the Mixed Hospital at Qassasin and the No. 8 Polish General Hospital at Kantara. In November 1945 the Mixed Hospital disbanded, the Italian section moving to the 12th General Hospital, and the Indian to the 22nd Indian General Hospital but, as both of these were situated in Palestine, the medical care of tuberculosis and other chest diseases could then also be supervised by the Chest Unit specialists.

The value of the Unit was greatly enhanced by the co-operation of the South African medical authorities who made the Military Hospital at Baragwanath, near Johannesburg, available as a sanatorium for British personnel. This became the destination for those cases of pulmonary tuberculosis who were considered curable by a prolonged period of sanatorium régime. Should active collapse therapy be indicated this was instituted and stabilized at Jerusalem before evacuation to South Africa, so that all cases arriving there were presumably improving. Those cases in which the extent or inexorable spread of the disease indicated a grave prognosis were, of course, evacuated home. So also were patients requiring thoracoplasty, which was only undertaken on very urgent indications in British personnel. As a general rule, cases of pleural effusion were also sent directly to the U.K. I have found records of 555 cases of pulmonary tuberculosis being evacuated to South Africa between January 1944 and June 1946, when the scheme was discontinued, an impressive contribution to the long-term treatment of the disease.

During the total period of its existence, 2,568 cases of tuberculosis and pleural effusion were admitted to the Chest Unit, this figure including Allied personnel who were accepted for surgical procedures. Artificial pneumothorax was undertaken in 585 cases, and thoracoscopy with attempted adhesiotomy was performed on 486 occasions. These two figures cannot be proportioned, as the latter includes cases of A.P. induced elsewhere and subsequently admitted for adhesion section, but experience showed that about 75 per cent of those cases which were initiated at Jerusalem required thoracoscopic intervention before a stable and effective collapse was obtained. Out of the last 238 A.P.s attempted, 192 or 81 per cent were successful, the remainder failing owing to varying degrees of pleural fusion. Complete figures are not available for other forms of collapse therapy but, during the period between April 1945 and June 1947, thoracoplasty was undertaken on 52 patients, phrenic nerve operations on 111, and pneumoperitoneum induced on 32.

One of the most useful functions of the Chest Unit, from the point of view of the other hospitals in the Middle East, was the specialized investigation of "doubtful" cases. Thus, over the last two-year period, 20 cases of unexplained hæmoptysis, and 74 presenting other symptoms of uncertain significance, were admitted for observation and disposal. In addition, the activities of the Surgical Team were not confined, of course, to the treatment of tuberculosis. For example, during the year 1946, bronchoscopy was performed 33 times, empyema or lung abscess drainage undertaken on 27 patients, and pericardectomy, lobectomy, and pneumonectomy undertaken once each.
In applying the experience gained by the Chest Unit, it is necessary to consider the approximate incidence and mortality of pulmonary tuberculosis in the Army. It was found that over the whole Command, and in British troops, the sickness rate for this disease during the four years 1943–1946 averaged 0·91 per 1,000 per annum, the highest figure being 1·01 in 1945. In 1947, however, there was a very significant increase to over 1·3 per 1,000, presumably accounted for by the large percentage of young soldiers serving overseas who had been brought up in wartime conditions. Hence, whilst the condition is relatively rare, and whilst the number of cases to be expected in a smaller peace-time army is not great, it is apparent that the continuance of conscription will result in the disease being a more serious problem than in pre-war days, owing to large number of youths in a very susceptible age-group serving for short periods. But, whilst the incidence of tuberculosis is not unduly high, the mortality rate is ominous. Out of 997 cases occurring in British troops serving in the Middle East during the five-year period 1943–47, there were 46 deaths, or 4·6 per cent, despite the fact that all patients whose prognosis appeared hopeless were evacuated home at the earliest opportunity. This figure represents an average of 7 per cent of all "medical" deaths occurring in the Command, and would undoubtedly have been much higher but for the temperate climate and excellent facilities available in Jerusalem. It is also possible, of course, that many of the advanced cases who reached U.K. safely may have died shortly afterwards. To reduce this heavy mortality, the following points are of prime significance:

1) Earlier diagnosis in the M.I. room. With pathetic regularity cases were received of gross and incurable disease who had previously reported sick on one or often numerous occasions for symptoms of such moment as hæmoptysis, and who had been returned to duty without investigation. It cannot be too strongly emphasized that clinical examination of the chest is not enough, as the majority of early cases of tuberculosis, and a high percentage of advanced ones, are seen and not heard. All patients who complain of progressive loss of weight, of pleuritic pain, or merely of chronic ill-health, apart from the more obvious symptoms, and particularly when associated with a family history of this ailment, should be referred to a hospital for radiological examination at the earliest opportunity.

2) Cases of acute tuberculosis, with marked toxæmia, should not be moved in too great a hurry. Collapse therapy is not normally indicated until the toxic phase is subsiding, and therefore it is far better that the patient should have a period of strict bed-rest when first diagnosed, rather than be immediately subjected to the strain of a long journey in order to reach a special chest centre.

3) For those few cases where urgent collapse must be performed, as for example severe and repeated hæmoptysis, it is highly desirable that facilities should also be available for thoracoscopic intervention if required. Otherwise, the presence of a large, thin-walled cavity held taut by adhesions may make the journey homewards more precarious than if nothing had been done at all.
When the services of a thoracic surgeon are not available, my own feeling is that the advancing disease is better tackled by a phrenic crush and pneumoperitoneum, rather than a pneumothorax. The improvement thus produced will be very variable both in degree and in duration, but in many cases it will be adequate to render the subsequent evacuation to a chest centre a much less hazardous undertaking.

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