Clinical and other Notes.

REPORT ON AN OUTBREAK OF FOLLICULAR TONSILLITIS IN MOASCAR CAMP, ISMAILIA, EGYPT.

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A somewhat unusual epidemic of follicular tonsillitis occurred in one of the two infantry battalions at Moascar, Ismailia, in May, 1926.

No other unit was affected to any extent nor were the officers or military families.

Tonsillitis is somewhat prevalent in the locality during the months of March, April and May, probably owing to the frequency of high winds and sand-storms.

The outbreak started in "X" Battalion on May 14, in the afternoon, the first 3 cases being admitted to hospital that evening, and on the 15th 54 were admitted. Subsequently 11 more were admitted on the 16th, 5 on the 17th, 1 on the 18th, and 3 on the 19th.

Owing to lack of accommodation in hospital, milder cases had to be isolated and treated in barracks, the battalion being inspected by companies and throat cases segregated. Thus, on the 15th 17 cases were isolated and treated, 41 on the 16th, 5 on the 17th, and 1 on the 18th.

The last 3 cases admitted to hospital on the 19th had been treated in barracks for three days; the outbreak had therefore virtually ceased on the 18th; only one more admission occurred during the following days, namely, on the 20th, when the orderly, who had been attending the cases in barracks, was sent to hospital with a very mild attack. There had been 78 admissions to hospital, and 64 treated in barracks, total 142 in five days. Ratio per 1,000 strength—169.

On questioning all these men as to the time of onset of their symptoms, a most remarkable explosive epidemic was revealed.

Of the total, 142, no fewer than 90 started their symptoms in the afternoon of the 14th, 38 on the morning or early afternoon of the 15th, and only 9 on the 16th, there being no fresh cases at all after the 16th, except the one admission on the 20th, of the orderly in attendance on isolation cases at barracks.

On the 25th, after eight days without any fresh cases, a sudden recurrence of the epidemic occurred, there being 35 admissions in seven days. On inquiry as to the time of onset of symptoms, it was found that the first 2 cases were relapses from the first attack, a third started on the night of the 25th, and 26 on the morning of the 26th, 4 on the 27th, and the last 2 on the 29th, the latter both being relapses from the first epidemic.
This again showed, though in milder form, the same remarkable explosive character.

What at first appeared to be an important feature in the epidemic was

the distribution by companies of the 142 cases in the first outbreak; there were 118 from "A" and "B" Companies, and only 3 from "D" Company, and 1 from Headquarters Company, the remainder from "C" Company,
Transport, Details, etc. Of the 35 in the second outbreak, 24 were from Headquarters Company, as compared with 3 cases that occurred before the 13th, of which 2 were in "D" Company and 1 in Headquarters Company. These facts, coupled with the explosive character of the epidemic, tended to eliminate the possibility of the infection being conveyed by droplet infection from man to man.

A careful investigation followed, considering in turn questions of over-crowding, ventilation, food, drainage, dining-halls, cook-houses, institutes, bathing, cinemas, etc., all of which were exonerated.

A plan of the barrack rooms was obtained and a spot map of the cases by barrack rooms prepared. Suspicion was then centred upon an area adjacent to the bath-houses, where all the dustbins containing dry refuse from the barrack rooms, institutes and dining-rooms were collected, paper and other consumable refuse being picked out and burnt in the boiler fire.
to provide hot water for the baths. The remainder of the refuse should have been removed early in the day, but in practice it was found that the native contractor's carts were invariably late and the refuse was left lying about up to mid-day, the ground around the bath-houses becoming foul and distinctly odorous.

The site was approximately twenty yards to the north of the nearest barrack rooms in the line. Investigation of the direction of the wind and prevalence of dust-storms about this time revealed that there were strong gusty winds accompanied by sand-storms and dust-storms in the afternoons of May 12 and 13 from the north-east, and again on the 24th from due north.

Considering these facts in relation to the spot map showing the case incidence by barrack room and the sudden explosive onset of the disease, there seems little doubt that the epidemic was due to wind-borne refuse dust.

The position of barrack rooms according to companies relative to the dusty area also explains the predominance of cases by companies.

Steps were taken to have this area dealt with, refuse being collected and incinerated a suitable distance from the barrack rooms and the bath boiler no longer fed with dry refuse.

From May 30 to the end of June, the month following the epidemic, there were only six cases of tonsillitis in this battalion, which compares favourably with the total of six cases in the other battalion in Moascar during May, the month of the epidemic.

The numbers steadily decreased from that time to the end of August and there was no recrudescence of the epidemic.

The accompanying table shows the occurrence of cases by dates of admission and by dates of onset of symptoms. The spot maps show the occurrence by companies and rooms in relation to the probable source of infection, and the chart shows the remarkable explosive character of the epidemic; the solid black line indicates the combined figures of cases treated in hospital and in barracks, shown by dates of onset of symptoms.

**Bacteriological:**

Twenty-seven cases were swabbed before treatment was started; of these, 9 showed spirilla and fusiform bacilli in association with large numbers of other organisms; the remaining 18 showed no predominant organism. In no case were Klebs-Loeffler bacilli seen. Of twenty-seven cultures on Loeffler's serum slopes no other organisms than staphylococci were obtained.

**Clinical Aspects:**

(1) Onset.—About fifty per cent started with sore throats and fifty per cent started with headache and malaise, i.e., in half the constitutional and in the others the local symptoms were the more prominent.

(2) Symptoms and Signs.—Practically all had enlarged tonsils with
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typical follicular plugs of pus or exudate; about ten per cent had sloughy white or grey punched-out ulcers. The temperatures averaged 102° to 103° F. and a few reached 104° F.

Those in which the throat swab showed spirilla or an unduly prolific fauna of organisms proved the worst cases clinically.

(3) Complications.—Quinsy, 10 cases (5.6 per cent). Adenitis, about 12 per cent slight adenitis; 2 cases chronic adenitis; none suppurated. Joint pains or rheumatism, none. Herpes, 9 cases (5 per cent). Respiratory, none. Relapses, two after hospital treatment (1.7 per cent); and two after barrack treatment (3.1 per cent).

(4) Length of Time in Hospital.

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<td>Over 20 days</td>
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1 Mild case, had been orderly in attendance
2 of these were relapses
1 case herpes
1 adenitis, 3 quinsy
1 Adenitis
1 quinsy, 1 hypertrophy
1 Adenitis
1 Quinsy
1 Hypertrophy of tonsils

I am indebted to Lieutenant-Colonel L. M. Purser, D.S.O., Commanding Military Hospital, Moascar, for permission to publish these notes.

A CASE OF CEREBRAL MALARIA.

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LANCE-SERJEANT F. J. W., Royal Artillery, was admitted to hospital on November 30, 1926, in a collapsed condition. He had been ill for four days, with slight abdominal pain and a little vomiting. He had no temperature and suddenly collapsed in his bed on the morning of admission. He was semi-conscious, jaundiced and slightly cyanosed. The heart sounds were very feeble and sibili were heard over both lungs. The abdominal movement was good and there was no distension. There was no oedema of legs but he had incontinence of urine and faeces. One cubic centimetre of camphor in oil was given. Hot-water bottles were applied and a rectal saline, which was not retained, given. He was seen by the surgical specialist with a view to the possibility of an acute abdominal condition, and a blood-film was taken for malaria.