Clinical and other Notes

orbicular ligament and above the oblique ligament. There was a separation of about \( \frac{1}{4} \) inch between the fragments, the upper showing comminution.

As the injury is of such rare occurrence, I took the patient to Professor Caird at the Edinburgh Royal Infirmary, who kindly examined the case and the skiagrams. He recommended that an attempt be made to wire the fragments, but, should it be impossible to get them into good apposition, the removal of the upper fragment would offer the best chance of obtaining a useful limb.

On June 22nd, assisted by Captain E. G. French, and with Lieutenant Pottinger giving the anaesthetic, I cut down on the head of the radius from behind, through the supinator brevis muscle. The comminution of the upper fragment was much more extensive than was shown by the skiagram. The head of the radius was split and the neck broken into several pieces, the line of fracture running obliquely from below the bicipital tubercle. The orbicular ligament was ruptured. The insertion of the biceps tendon into the tubercle remained intact.

As wiring was out of the question, the upper fragments were removed. A gauze drain was inserted and the wound sutured. The wound healed by first intention, the stitches being removed on July 3rd. Passive movement and massage were commenced as early as possible.

Flexion and extension have almost entirely been regained, and pronation and supination to about two-thirds of the normal range.

On July 30th the patient (without my knowledge) lifted a 56 lb. weight with his affected arm.

He was discharged to duty on August 12th.

The second skiagram shows the condition of the joint after the operation.

ENTERIC FEVER IN KIRKEE IN 1909.

By Captain C. Scaife.

Royal Army Medical Corps.

Twenty-seven cases of enteric fever occurred in Kirkee during 1909, and as the average number for the last six years was twelve (including 30 cases in 1904), this might be considered to be a slight epidemic in these days of improved sanitary conditions in India.

Inoculation was strongly advocated both before and during the epidemic, and in view of this it was thought that a statistical account might possibly be of some interest.

The average annual strength of British troops in Kirkee for the year 1909 was 877, and consisted of one brigade R.F.A., and a detachment of Infantry, which was relieved at the end of every quarter.

Owing to this quarterly change in the British Infantry, and also to the monthly increase in the number of inoculations done, the percentages
of the inoculated and the non-inoculated had to be made out every month, and an average struck for the year. This in itself, though not absolutely accurate, is sufficiently so for all practical purposes.

The average annual number of N.C.O.'s and men inoculated was 45 per cent., of non-inoculated 55 per cent. Twenty-three cases of enteric occurred amongst the non-inoculated, with three deaths, and four cases amongst the inoculated with no death. Three cases are reckoned among the non-inoculated because they only received one dose each, and that four, six and seven days respectively before admission to hospital. These three men, in all probability, were infected before the inoculation took place. As regards the protection from infection, in this epidemic it works out at something over $\frac{4}{3}$ to 1. The average duration of the fever in both inoculated and non-inoculated was twenty-four days.

<table>
<thead>
<tr>
<th>Average annual percentage</th>
<th>Number of cases</th>
<th>Duration of fever</th>
<th>Number of deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inoculated 45 per cent.</td>
<td>4</td>
<td>24</td>
<td>Nil</td>
</tr>
<tr>
<td>Non-inoculated 55 per cent.</td>
<td>23</td>
<td>24</td>
<td></td>
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Protection of inoculated from infection $\frac{4}{3}$ to 1. Positive "Widals" were obtained in all cases.

The epidemic was one of average severity, most of the cases developing the group of symptoms known as "the typhoid state." Complications were of fairly frequent occurrence.

The four cases in the inoculated were in distinct contrast to those in the non-inoculated. Their appearance was never typical of enteric, the "typhoid state" was never present, their intellects remained clear enough for them to read and take an interest in their surroundings, and none of them felt really ill during the course of the disease. One of them had a slight hemorrhage, but this did not in the least affect him or his subsequent progress. The conclusions to be drawn from this epidemic, are the high ratio of protection from infection, and a distinct modification of the symptoms, in the inoculated.

As regards the operation of inoculation, some slight modifications were adopted. Instead of the small inoculation syringe being used, one capable of holding 20 cc. was substituted, which was found to accelerate the operation very considerably. The use of boiling oil, except for the primary sterilisation of the syringe, was discontinued. The needle, between each inoculation, was sterilised by passing it through a flame and then cooled in cold sterilised water. The spluttering of boiling oil (caused by dipping a moist needle into the oil) which is unpleasant for the operator and those in the vicinity, was thus done away with, and proved satisfactory in a series of 700 cases.

The unit which we had to deal with had fewer men inoculated than any in India. At the beginning of 1909 they had only 19 per cent. of
their strength inoculated, and at the end of 1909, 53 per cent. Lectures were given by various medical officers, and the men who refused were spoken to personally. Not until one or two deaths occurred did they come up in any great numbers, and even then there were a lot of “fatalists” who absolutely refused to be inoculated. Considering the diminished liability to infection, the much decreased mortality, and the modification of the disease, is it not now time for compulsory inoculation?

THE CONTINUOUS TREATMENT OF SYPHILIS.

By Major F. J. W. Porter, D.S.O.
Royal Army Medical Corps.

An inspection of syphilis case-sheets reveals in a very large number of cases the fact that many of our officers who give mercury by the mouth are doing so in a very intermittent manner—“No symptoms, no treatment,” is a frequent entry.

It is generally accepted that two years' continuous treatment is necessary for the cure of this disease, and if intervals of two, three, or four months without treatment occur, it is very difficult to see how the soldier is obtaining what is considered, both by the leaders of the profession and the medical regulations, necessary for his recovery.

The whole question of intervals in the administration of mercury appears to me to depend entirely on how long it takes, when given by the various methods in vogue, to become entirely eliminated from the body.

When Colonel Lambkin introduced the method of intramuscular injections of grey oil into the Service, it was felt that one great advantage over dosage by the mouth consisted in the fact that several foci of mercury were introduced which took a considerable time for absorption, also, that so long as they existed the patient was daily receiving minute quantities of the necessary drug. At first it was uncertain how much of the drug should be introduced, and there is no doubt that cases of poisoning from over-dosage occurred. Of late years it has been the custom to give courses of injections with intervals.

Dr. R. W. Mackenna, of Liverpool, has conducted extensive investigations on the relative rate of elimination of mercury in the urine when administered orally, intramuscularly, and by inunction.

He is shortly publishing his results, but in response to my request he has very kindly allowed me to make use of his work, and for the purposes of this paper, I cannot do better than quote his letter:—

“(1) Female: received liq. hydrarg. perchlor. (B.P.) in doses of 1 drachm, thrice daily for three months. In that time she received the equivalent of 9.3 grains of mercury, and one week after last dose I failed to find any trace of mercury in the urine.

“(2) A man received 4 grains of hyd. c. creta by the mouth daily for