On the day of death I was greatly struck by the enormous number of micro-organisms passed in the urine, which was collected in a specially cleaned vessel and examined at once. An attempt was made to cultivate the *M. melitensis* from this, and though I obtained two small colonies of a coccal bacillus, which clumped to the serum of a Malta fever patient, yet the evidence that they were *M. melitensis* was not conclusive, and subsequent cultures were not satisfactory. The one motile bacillus isolated did not clump to the serum of an enteric patient.

The clinical appearance of the case and the subsequent bacteriological examination seem to prove that this was probably a Malta fever case presenting ulceration of the small intestine in a situation almost identical with that of typhoid, and I believe the most skilful pathologist would have been unable to state that the ulcers found at the *post-mortem* were not those of typhoid fever.

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A NOTE ON THE USE OF LIME JUICE IN ENTERIC FEVER.

By Captain E. T. F. Birrell.

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My attention was drawn to the significance of certain complications in enteric fever by a case under my care in the Station Hospital, Rawalpindi, during the summer of 1900. The course of the fever had been severe, and marked by a relapse which left the patient in an extremely weak condition. Progress was slow, when, on the fourth day of apyrexia, and while still on a diet of milk and beef tea, he passed frequent small blood-stained stools, containing a small quantity of mucus, resembling the motions of dysentery. The usual remedies failed to check the process, and this additional drain on a system already weakened resulted in death on the third day from the onset of the symptoms.

At the autopsy were seen the ordinary lesions of enteric fever in early repair, and in addition numerous petechial hemorrhages and ulcers, varying in size from a millet seed to a small pea, scattered generally over the mucous membrane of the lower portion of the small, and of the whole of the large, intestine. The ulcers, being uniformly small, not concentrated on the folds of the mucosa, and showing no tendency to burrow, differed from those described as occurring in ulcerating dysentery.¹ Such appearances are, however, occasionally met with in scurvy,² and it might be assumed that the scorbutic condition had set in from the deficient supply of vegetable salts in a diet so limited, a deficiency perhaps accentuated by the increased katabolism of a prolonged and wasting fever.

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Acting on this supposition the gums of all enteric fever cases were examined, and almost invariably, after a week or ten days of milk diet, were found to show a red line along the margins, in some cases even passing on to a spongy condition, these more severe cases frequently showing traces of blood in the stools.

Lime juice (one to two ounces daily) was administered, with the result that the line on the gums disappeared and the tendency to hemorrhage markedly decreased. This course was accordingly followed as a regular part of the treatment of all enteric fever patients after the first week on milk diet, and continued until a solid diet with vegetables could be taken.

Ordinary lime juice, as used in military hospitals in India, diluted with water and sweetened with sugar, was well borne, but some patients preferred the juice of fresh limes (four to six daily), as being more agreeable. Any depressant effect was inappreciable.

The same practice was carried out in an intractable case of chronic dysentery, on the hypothesis that the hemorrhage might partly be of a scurvy nature, the patient having been on a milk diet for a considerable period, and certainly the results of the administration were most satisfactory. The success of this mode of treatment, in my opinion, justifies a more extended use of lime juice in cases where it is necessary to restrict the diet for long to little but milk, especially in prolonged febrile conditions where the additional burden of a scurvy element may suffice to turn the scale against the patient.

THE SUB-CUTICULAR SUTURE AND LEADEN PLATE, AS USED IN THE ROTUNDA HOSPITAL, DUBLIN.

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The sub-cuticular suture was first described many years ago by Kendal Franks, of Dublin, and Pozzi used it with a deeper strand for the tissues beneath the epidermis. This combination of suture and leaden plate is the invention of Dr. Tweedy, of the Rotunda, and as it can be applied to practically all skin wounds with excellent results, the following detailed account is given:

The wound edges are carefully washed with normal saline solution, all débris, blood clots, &c., being removed. A straight needle, threaded with a long silk-worm gut suture, is inserted in such a manner that it enters the skin about a quarter of an inch from the commencement of the incision, and traverses one edge of the wound for half an inch in the deeper layer of the epidermis parallel to, and just beneath, the cut surface. The needle now emerges, crosses the wound at right angles, and enters the opposite edge of the cut, which it traverses in a similar manner for