

and the deaths 10; sick to strength per cent., 91·2; deaths to strength per cent., 0·8.

It will be allowed that the contrast is striking; but figures of this sort only tell the truth in part: they take no account of the comparative gravity of the diseases in the stations thus contrasted. None know better than Mr. Cornish that a vast number of the men discharged as *cured*, after suffering from the formidable types of tropical disease prevalent at Secunderabad, have their constitutions so injured that in a few years they disappear from the effective strength of the army. I am quite aware that Secunderabad, like most other places, enjoys some years of exemption from epidemic visitations; but, this notwithstanding, the loss from death and invaliding in the old infantry barracks there during nearly half a century has been so enormous as to give them an infamous notoriety wherever British military statistics are known and studied. The advantage or otherwise of placing European troops in such a climate as that of Wellington on the Neilgherry Hills, is not to be determined by contrasting the mortality-rate for one year, or a limited number of years, between a regiment quartered there and in any other single station. What, in common with many high authorities, I insist on is, that by quartering as large a portion of our European regiments as possible on mountain ranges, the health of the men will be maintained, their constitutions will in a great measure escape the deteriorating influences to which even in the healthiest years they are exposed on the plains, and that thus many valuable lives will be spared, and an enormous saving in money effected. It must be borne in mind, that sanitary regulations of the strictest kind are as necessary on hill stations as elsewhere; and the young medical officers trained in the Army Medical School know well that this lesson has been much insisted on by my colleague, Prof. Parkes, and myself; and it is notorious that one reason why a prejudice was excited in the minds of the authorities against mountain ranges in India was the sickness and mortality caused by the flagrant neglect of sanitary police regulations, and this not at Wellington only, but in most of the Bengal hill stations, as has been well shown by my able friend, Dr. Alex. Grant, of the Bengal army.

With regard to the rumour noticed in your leading article of the 22nd of March last, on the proposed abandonment of the barracks at Wellington, and giving them up for other purposes than those for which they were intended, I can give my testimony to the fact that such a report prevailed at the time in circles usually well informed on such matters, and no small uneasiness was thus excited in the minds of those who are interested in this important question.

I am, Sir, your obedient servant,

W. C. MACLEAN, M.D.,

Deputy Inspector-General, and Professor Army Medical School.

Fort Pitt, Aug. 1862.

## CHOLERA IN INDIA.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 28th ult., Dr. MacLoughlin writes, in reply to the letter of "An Indian Medical Officer" of May 17th, on the above subject. I can, with great confidence, bear out the statement of Dr. MacLoughlin, that no case of cholera occurs but is preceded by diarrhoea. In the year 1854 I had frequent opportunities of seeing cases in this country, and, with one exception, I could always trace diarrhoea to have been for some time present. The general statement given by the patients' friends was, that for some time they were troubled with looseness of the bowels, but being free from pain, were not alarmed, though the evacuations were watery and copious, giving to the patient the sensation as if water was passing through a tube, with a general coldness over the abdomen, and repeated calls to stool. When such, as in many instances, occurred, and no attention was paid, exhaustion, vomiting, and cramps soon followed, and it was only then that the medical officer was called. In many cases the time lost was never recovered; exhaustion had gone too far; the deep prostration of the patient could never be retrieved, and death soon came to terminate his sufferings. The medical officers, finding that all the cholera cases under their charge were preceded by diarrhoea, impressed upon the inhabitants the necessity of having medical attendance on the slightest indication of diarrhoea showing itself, and it was only then that a marked decrease of the attacks and deaths took place, thus proving that cholera was curable when taken early. Though unable to speak personally as to how it attacks the patient in India, yet from the symptoms given, it seems to be the same as here. Let the medical

officer in charge on its first outbreak make the men attend to the state of their bowels, for it is owing to the absence of pain (though the copious evacuations alarm a little) that no fear is entertained until cramps and vomiting and deep exhaustion show themselves, and then the medical officer is sent for. Cause them to apply to the officer in charge, and let the diarrhoea be checked, and what would have become an undoubted case of cholera will terminate in diarrhoea, and that fearful and alarming disease will, by hygienic management, pass over the camp with less mortality than it would otherwise have done.

I am, Sir, your obedient servant,

JOHN GRAHAM, Surgeon.

July, 1862.

## THE DETERMINATION OF URIC-ACID CALCULI.

To the Editor of THE LANCET.

SIR,—A small calculus, weighing between five and six grains, was recently placed in my hands by my friend Mr. J. B. Carter, of Chapel-town, who wished to know its composition. Chemical analysis showed it to be uric acid, with a trace of urate of lime. Now the determination of uric acid by solution in nitric acid, evaporation, and purple reaction when ammonia is added, is an experiment which with a minute quantity for the operation would be very likely to fail in the hands of a person not experienced in such matters.

We have not many authors in the department of animal chemistry, and I do not know of any work treating morbid concretions more fully than does "Simon's Animal Chemistry." The standard works on urinary deposits do not include the analysis of calculi; and although it is probable that some accomplished microscopists have applied the microscope to the purpose, its use in such cases is not general.

In the present instance, I took a most minute fragment of the calculus, about the one-thousandth of a grain, and added it to a small drop of liquor potassæ upon a slip of microscopic glass. It dissolved when a small drop of acetic acid was brought into contact, and a perceptible precipitate marked their line of junction immediately. The thin cover being placed over the object, it was viewed by the quarter-inch power, but only exhibited an amorphous deposit. In five minutes, however, this granular matter had given way to thousands of characteristic crystals, any one of which would be enough to decide the presence of uric acid.

This micro-chemical test can be applied more rapidly, and with far less trouble and uncertainty, than the purely chemical one. It appears to me to resemble Dr. Guy's microscopic determination of arsenious acid, as being a process exceeding in delicacy some of the chemical ones now in use, and therefore as deserving to be used conjointly with chemical tests. Of course the condition of the uric acid, whether free or with what base united, is a question left equally untouched by the chemical and micro-chemical processes now compared.

I am, Sir, yours respectfully,

R. REYNOLDS, F.C.S.

Leeds, July, 1862.

## MR. SOLOMON AND INTRA-OCULAR MYOTOMY.

To the Editor of THE LANCET.

SIR,—The old story of Columbus and his egg is continually being repeated in everyday life. We ourselves, indeed, often find a thing very easy when once we have been shown how it is to be done. This thought forcibly recurred to me when reading in last Saturday's LANCET Mr. Solomon's paper "On the Relief of Near Sight without Spectacles," and the description he gives of a new operation, which he calls *intra-ocular myotomy*. This is, however, I find, none other than division of the ciliary muscle as usually performed, and for the very purpose that Mr. Solomon so gravely sets forth as being new in ophthalmic surgery. But this is not all; for Mr. Solomon himself was first shown the operation some three years ago at the Royal Westminster Ophthalmic Hospital by Mr. Hancock, to whom we are really indebted for the introduction of division of the ciliary muscle, and who, I am in a position to prove, took some pains to explain to Mr. Solomon its various uses in the relief of eye-diseases, not omitting myopia. There is therefore something more than mere want of candour in Mr. Solomon not giving credit where credit he knows is due.

I am, Sir, your obedient servant,

Bedford-square, August, 1862.

JABEZ HOGG, M.R.C.S.