

amylaceous and other food particles are apt to lodge. In these situations the caries being further advanced, definitely located, and associated with pigmentation, is easily and distinctly observable.

Perhaps the above explanation may help my critic to reconsider his statement that "the true cause of caries has yet to be discovered and is not quite so simple as Dr. Wallace would lead us to believe." Why not? When the true cause of anything is discovered it generally appears simple. I think, too, it is hardly correct to say that I have "advanced an *ingenious* theory" which is admittedly "so simple." The seriousness and importance of the subject demand that the theory should be put to the test of direct observation rather than be subjected to destructive criticism founded merely on current beliefs.

My critic thinks that "there is something, so far not recognised or understood, which plays a most important part in the liability of teeth to be attacked by caries." If he will only test the theory (as any medical man or dentist can easily do) in a few typical cases of extensive and rapid caries and in a few cases of complete or almost complete freedom from it, I think he will recognise and understand the something which plays that most important part.

I am, Sirs, yours faithfully,

Kingston-on-Thames, July 2nd, 1900.

J. SIM WALLACE.

CHELTINE FOODS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 30th you published a letter from which it appears that the makers of these foods now claim that the starch contained in them has been so modified that it is not convertible into diabetic sugar during digestion. Will you permit me to point out that by the action of the amylolytic enzymes of the digestive secretions the poly-saccharids—starch and the dextrins—are not converted into diabetic sugar or dextrose, but into the di-saccharid maltose; so that the claim put forward for the Cheltine foods might equally be made for any amylaceous food. Developing the makers' thesis a stage further one would be led to conclude, in opposition to all experience, that starch is a suitable food for diabetic patients.

I am, Sirs, your faithfully,

Cambridge, July 4th, 1900.

W. E. DIXON.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Monsoon.—The Unparalleled Extent of the Famine.—Diminished Plague Figures.—The Extermination of Rats by Disease.—Calcium Chloride in Plague Inoculation.—The Standardisation of Haffkine's Prophylactic.—Enteric Fever in the British Army in India.—Rabies.

THE monsoon has reached India and promises a normal amount of rainfall. The conditions are favourable in the west as well as in the east, and anxiety as to the prospects in the famine districts has thus been immensely relieved. Anything like immediate improvement, however, in the numbers under famine relief is hardly to be expected. At the present time there are nearly 6,000,000 persons being aided by charity and the areas affected in the South Punjab, East Sind, Rajputana, Central India, Berar, the Central Provinces, Deccan, Bombay coast districts, Kathiawar, and Gujerat, cover between 600,000 and 700,000 square miles.

The famine of 1876-78 surpassed every previous one in intensity, but the present one is far worse both in severity and extent. The drought of 1899 was unique; not only has the recent drought extended over a wider area, but the tracts affected have been more completely dried up.

With the marked diminution in the plague mortality all interest in and anxiety about it seem to have subsided. For the week ending June 9th only 417 deaths were recorded for the whole of India. Of these Bombay city returned 131 (this is probably much under the correct figures), Karachi 12, Bombay Presidency 57, Calcutta 138, Bengal Presidency 54, and Aden 8. Bombay city continues to return a very high death-rate. It is said that illness of every description abounds,

but allowing for a certain amount of cholera, small-pox, and unusual fatality in other diseases the death-rate of over 70 per 1000 and the excess of 547 in the total mortality are too high, and can only be explained by a continuance of the plague epidemic. I am sorry to say that the number of weekly inoculations has much decreased. The heightened birth-rate suggests that the women have not according to custom left the city for their native country. This is probably due to the famine.

Reports from the populous districts in and around Sylhet show that blackwater fever has been assuming the proportions almost of an epidemic. Although it is not so rapid in its fatal effects as plague, very few cases are said to recover. Treatment seems to be of little avail.

The extermination of rats is a difficult work in India owing to the opposition of the natives, so that the experiments recently conducted on the European continent are of especial interest. The object aimed at was the introduction into the rat community of a fatal form of disease which was at the same time harmless to human beings. This has apparently been very successfully accomplished. Into a Paris sewer were introduced 200 healthy rats, and pieces of bread impregnated with the virus of a disease which had previously been proved very fatal to rats were scattered about. Other food was also supplied. In eight days the epidemic broke out and dead bodies were found in considerable numbers. On the twenty-eighth day only eight out of the 200 rats remained alive. The experiment was repeated in Hamburg, Copenhagen, and elsewhere with equally good results. It was found also that even if the poisoned food was laid in open places, such as grain warehouses, either a disappearance of the rats occurred or a great diminution in their number took place. In view of the probable spread of plague by rats it may almost be hoped that this new epidemic will spread all through the rat population in every part of the world. It is by no means certain, however, that rats are the chief means of the dissemination of this disease.

An interesting report on the Haffkine prophylactic has been submitted by Captain Stevenson, I.M.S. Amongst other points he refers to the effect of calcium chloride on the febrile reaction and shows that given both before and after the inoculations it has a good effect. The best results were obtained when the calcium chloride was given a few days before the inoculation as well as after it. Yersin's serum was tried at Mauritius, but the reports were unfavourable.

It is satisfactory to learn that attempts are now being made in the Plague Research Laboratory, Bombay, to standardise Haffkine's prophylactic. Improvements have been effected in the manufacture of the fluid, and since occupying the new premises at Parel no less than 530 brews, or 160,000 doses, have been tested and all were found to be sterile.

The increasing prevalence of enteric fever in India as far as the British army is concerned is shown by the following table:—

Year.	Admissions per 1000 strength.	Year.	Admissions per 1000 strength.
1890	18.5	1895	26.3
1891	20.4	1896	25.5
1892	22.1	1897	32.4
1893	30.1	1898	36.9
1894	20.9		

In spite of every attention to the water-supply and sanitation in the cantonments enteric fever has largely increased. The case death-rate is still very high also, being 24 per cent. It is obvious that the water-supply is not the main or the most important vehicle for the infection. In some places the water is purified, in others it is left untouched, and at some stations there was more fever after purification than before. Boiled water is tasteless and not always cool, and Tommy Atkins will not drink it. The immediate question is not why enteric fever should be prevalent, but why its occurrence has so greatly increased during the past few years. The admission rate for officers in 1898 was no less than 40 per 1000, as against 34 per 1000 in the previous year. This rate is higher than for non-commissioned officers and men, and it shows that the theory of the men contracting enteric fever in the bazaars requires considerable modification.

As the Pasteur Institute at Kasauli is not yet in working order it has been found necessary to send four more soldiers and a child to the Pasteur Institute at Paris.

June 16th.