infection of houses. As in India, concealment of cases and deaths has been resorted to in order to avoid troublesome interference with personal liberty and domestic arrangements. A large staff of agents and doctors has, however, been engaged by the Sanitary authority, and this establishment appears to have been handled vigorously to good purpose.

CEREBRO-SPINAL FEVER AT OMUDURMAN.

From time to time notices have appeared in the papers regarding outbreaks of fever in the neighbourhood of Omdurman among the native population of the Ghezirah and the Sudanese troops stationed there. These outbreaks are referred to in Slatin Pasha's book, and the disease is described as typhus fever. From a report by a medical officer of the Egyptian Army, which I have recently had an opportunity of reading, it appears that the epidemics in question, which prevail mostly in autumn, are epidemics of cerebro-spinal meningitis. The occurrence of this disease in this locality and on such a large scale constitutes a new and interesting fact in epidemiology. The report will no doubt be published ere long.

13th July 1899.

K. McL.

Review.

An Enquiry into the Nature of some Diseases of Gums as seen in Indian Jails.—By Major Andrew Buchanan, M.D., L.M.S., Superintendent, Central Prison, Nagpur, C. P. NAGPUR CENTRAL JAIL PRESS, 1899.

Major Andrew Buchanan, of Nagpur, in this valuable little book has taken in hand a subject which has been a vexed question among medical men in India for over twenty years. So far back as 1881 Dr. (afterwards Surgeon-General) W. R. Rice, commented upon, in a special report, the prevalence of spongy gums among the prisoners in Nagpur Jail. In 1886, Colonel R. D. Murray, L.M.S., in these columns, wrote on what he called "Malarial Scurvy" and described the "post-molar ulcer," now often called "Crombie's ulcer." In 1888, Dr. A. Crombie in a paper* read before the Calcutta Medical Society gave the best description that has ever been written of this and kindred cachectic conditions among prisoners. At that time the Sanitary Commissioner to the Government of India, Sir Benjamin Simpson, had put forward the view that a more or less manifest scorbutic taint underlay all the ill-health of prisoners. To this view Dr. Crombie from his experience at Dacca was opposed; he looked upon the spongy gums and anaemia as indicative of previous attacks of malarious fever, a view which has apparently commended itself to most Bengal medical officers who have written on the subject. It is this view, especially as put forward by Dr. W. J. Buchanan, of Bhagalpur, in his "Jail Hygiene" that Dr. Andrew Buchanan is opposed. Major A. Buchanan is strongly in favour of the view that these spongy gums are very frequently scurvy and due to insufficient supply of good vegetables in the prisoners' diet. He very ingeniously handles all the arguments in favour of what he calls the "Bengal" or "malarial" view. There can be little doubt but that Major A. Buchanan met with genuine scurvy in Nagpur Central Jail during the past few years, and there is equally little doubt that in Bengal, as well as in the other Provinces, true scurvy is occasionally met with, especially where medical officers do not resolutely fight against the almost invincible tendency on the part of jailers to pass off any green stuff in any quantity as vegetables.

It appears, however, from the opinions recorded on page 63, &c, of the book under review, that the majority of medical officers in the Central Provinces are averse to admitting a scurvy taint, and none of them say anything about any deficiency of vegetables. All, however, lay stress upon neglect of teeth (causing a free deposit of tartar which apparently is both a cause and a consequence of gum ulceration), dyspepsia, disarrangement of the bowels, gumboils, decayed stumps, mercurialism (in cases treated by quacks) as causing spongy and ulcerated gums. Major Buchanan admits all these, both as independent and contributing causes; in fact, his division into four classes will be accepted by everyone. They are (1) those due to scurvy or malnutrition, (2) those due to mercurialism, (3) those due to want of attention to cleaning of the teeth, (4) those due to other causes than the above.

Another interesting question is discussed in Chapter VI, that is, the relationship, if any, between spongy gums and the "post-molar-ules" described by Murray and Crombie. The general opinion recorded is that there is no connection between the two; that "post-molar" ulcers are not so common as spongy gums, but both are dependent upon the same cause. With this opinion we are disposed to agree. Chapter IX gives a history of scurvy in Nagpur Jail, where the supply of vegetables, owing to scanty water-supply, has always been a difficulty. The next chapter gives Major Buchanan's views as to the prevention of scurvy in jails—by attention to gardening, quality and quantity of vegetables, use of onions, potatoes, and especially the sweet potato (an excellent anti-scorbutic), the issue of mango and lime pickle, and above all by the weekly inspections of the medical officer and prompt local treatment of the pyorrhoea alveo-
laris. An appendix gives a summary of the views of many medical officers who replied to Major Buchanan’s queries.

We have, therefore, seen that many difficult and interesting questions are raised in this little book. For our own part we are not convinced that scurvy is to any great extent, in ordinary years, prevalent in Indian jails; our experience, however, is confined to Bengal. In the exceptionally unhealthy year, 1894, we remember a number of extremely bad cases of ulcerous and spongy gums. This was a very malicious year, and the death-rate from malarial cachexia and dysentery was extremely high all over India (except, we believe, in the Punjab). Fortunately, in Bengal, during the past four years, matters have been much more satisfactory, and much less has been written about spongy gums, &c. That mercurialism—the use of para by vaids and hakims—is a very frequent cause of the toothless condition of many natives of the poorer classes we well know. That neglect of the teeth is in jails a very potent cause of red, swollen gums we also believe; and in one jail since the use of tooth-sticks has been ordered, we know that spongy gums are much less frequent. To what extent mere blue or black colouration of the gums is indicative of defective nutrition we cannot certainly say. We have noted hundreds of gums firm and flat, without pus ulceration or sponginess, but permanently discoloured blue or blue-black in men healthy, fat and sleek. We have also seen many cases of very grossly neglected tartar-covered teeth in healthy and sturdy men. We have also seen loose teeth and retracted gums in many cases, complaining of fever, diarrhoea, or dyspepsia, and often associated with red raw patches on tip or dorsum of the tongue. These are the cases in which the question of scurvy arises. They have frequently been called scurvy, though seldom “returned” under that heading. The argument that the more advanced symptoms of scurvy (echymoses in limbs and blood extravasations) are seldom seen among prisoners, is admitted by Major Buchanan and explained ingeniously that this is because the jail dietary, even if deficient, in vegetables at times, is still sufficiently good to prevent any of the gross forms of scurvy.

It seems to us, however, that there is truth in both views; that true scurvy does sometimes occur may be admitted, but we incline to the view that malaria (that is previous attacks of malaria “night fever,” &c.) may so reduce a patient by weakening his digestive power that a state of malnutrition results, which is shown in the flabby, spongy gums and that the same result may be caused by a deficiency of vegetables, and that the gums are specially affected by both these causes when they are neglected and tartar has been allowed to accumulate around them, or when the teeth have suffered from over-dosing from mercury. In years when as in the Central Provinces in 1897, large numbers are admitted in a famine-stricken condition, no doubt plenty of true land scurvy will be seen, and again in a malarious year, when prisoners suffer much from fever, a precisely similar result will be found, even though the vegetables and other food offered to the prisoners (but not necessarily assimilated and digested) are of excellent quality and quantity. Professor Wright has shown that none of the symptoms usually relied upon for a diagnosis of scurvy are pathognomonic; they merely point to a defect of blood coagulability, and this we maintain may be produced either by a want of vegetables supplied or by a want of assimilation of the food supplied owing to digestive feebleness the result very frequently of fever attacks especially when neglected. The question can only be solved, we think, on the lines indicated by Professor Wright, and it is very desirable that a series of analyses of the urine in such cases be undertaken to determine the amount of the total acid excreted.

In conclusion, we can strongly recommend Major A. Buchanan’s little book to all medical officers. He deserves the greatest credit for having so ably discussed this old and important question.

Current Literature.

**MEDICINE.**

Aetiology and Serum Treatment of Dysentery.—In the Supplemento Al Poliedro.—February 11th, 1899, Professor Celli and Dr. Valenti, of Rome, published an important note on the “Aetiology of Dysentery.” The authors state that in 1898 Professor Celli published in extenso in the Annali d’Egiene Experimental his remarks on the “Aetiology of Dysentery in its Relations with the Bacillus Coli and with its Toxins,” in which he demonstrated that the diagnosis of this bacteria can be made by the study of the action of their toxins, and by this means he differentiated from the many varieties of the B. coli that form which he called the bacterium colidysentericum, because he considered it the specific cause of dysentery in man. These researches were afterwards confirmed by Del Pino and by Alessandri. Since then the authors have continued their experimental observations on the toxic products of the same variety of bacteria, and in the respective antitoxinimmunity and antitoxithapy. Using the toxin obtained from alcoholic precipitation of broth cultures filtered through blotting-paper, and reduced to powder toxiprotein—that is, a mixture of toxin and protein—after a long period of useless attempts of inoculation of dogs they, on May 4th, 1897, succeeded in immunizing an ass, at first subcutaneously and then endovenously. This animal after a long time no longer reacted to the toxic inoculations, so that they gradually arrived at from seven centigrammes of dry toxin injected subcutaneously to one gramme injected into the veins. The serum that they had obtained was called for brevity and clearness of expression serum A.

Meanwhile Valenti studied the action of the proteins of the B. colidysentericum and, comparatively, of other B. coli, extracting them according to Koch’s method for the new tuberculin. He demonstrated that they had no action in herbivora, and, instead, in dogs and cats a characteristic action, chiefly in the liver, in the kidneys and to that of the above mentioned toxiprotein. With these two proteins, which they call O. and C., they tried to immunize two young asses. Of these two