

the first sound of the heart. My object now is purely destructive; and if I have contributed in any way towards the demolition of the theory set up by Sir Richard Quain I shall feel satisfied. No doubt this theory has already received the *imprimatur* of Dr. Pettigrew, but that neither establishes its accuracy nor its originality.

I am, Sirs, yours faithfully,

Liverpool, June 20th, 1897.

JAMES BARR.

THE TEETH OF TO-DAY.

To the Editors of THE LANCET.

SIRS,—Caries of the teeth is by no means a new disease, as the examination of Egyptian mummies 2000 years old shows; but taking modern times and civilised communities there can be no doubt as to its increasing prevalence in the present generation. This statement is based upon the results of a series of examinations of the teeth and jaws in skulls of different periods, both British and foreign, by clinical observation and the law of supply and demand, the number of dentists increasing in a ratio out of all proportion to the increase in the population. Some think, and perhaps with a certain amount of truth, that this increase in disease is more apparent than real, as so much more importance is attached to the teeth both from a health and æsthetic point of view; but that former generations appreciated good teeth may be gathered from the works of Smollett, Fielding, Mrs. Radcliffe, and others, in which the heroine is invariably described as having "pearly teeth." Our premisses being granted, it behoves us to endeavour to discover the causes of this degeneration with a view to their removal where possible. "Degeneration may be defined," says Ray Lankester, "as a gradual change of the structure in which the organism becomes adapted to less varied and less complex conditions of life; whilst elaboration is a gradual change of structure in which the organism becomes adapted to more and more varied and complex conditions of existence. In elaboration there is a new *expression* of form corresponding to new perfection of work in the animal machine. In degeneration there is *suppression* of form corresponding to the cessation of work." Degeneration is doubtlessly taking place in the teeth and jaws of man.

In structure and character the teeth are becoming more and more faulty, having, perhaps, pits in the enamel and jagged edges—honeycombed teeth—fissures, grooves, and other imperfections not traceable to disease. Microscopically, the dentine often presents cavities in its substance known as "interglobular spaces" and due to imperfect calcification, all of which lesions render them liable to caries. It was until quite recently believed that teeth which easily fall a prey to caries were deficient in lime salts, but the elaborate experiments of Black in America and Charles Tomes in this country have disproved this view. Numerically the teeth are becoming less, the wisdom tooth often failing to make its appearance, and perhaps the absence of the superior lateral incisor is more frequently observed. The shape of the jaw is changing from the square to the V-shaped, the so-called "educated jaw," and this is generally associated with irregularity, which is a potent predisposing cause of caries. The main factor of this degeneration and the prevalence of caries is to be found in the modern mode of living and civilisation generally. Let us take the life-history of a tooth temporary and permanent. First, in its embryonic stage, the mother while pregnant, if in the lower class, must necessarily go about her work as usual, and added to that there are those frequent strikes entailing so much privation and anxiety. What sort of children does one expect these women to bear? Weak, sickly, puny, probably rickety, and certainly with mal-developing teeth. And if in the higher ranks of life the future mother still pursues her round of gaiety and fulfils her social obligations. Now, would Lord Rosebery or any breeder of horses allow his mares when in foal to work? Moreover, it is becoming less and less common for mothers in the upper classes to suckle their children, and all this must have a deleterious effect on the developing teeth.

Later, when the second set are erupting or not yet fully calcified, our children lead a very different life to those of our ancestors—far more excitement, late hours, cultivation of the intellect at the expense of the physique, and cramming at school all tend to injure the developing teeth both by interfering with nutritional changes and locally by bringing

about an unhealthy condition of the mouth. By the way, I think that sweets as a cause of decay have been much maligned. Sugar is the natural food of children; if not, why should the taste be so universal and why sugar in mother's milk? I believe they do harm only when causing dyspepsia. And now I come to adults, in whose teeth it is generally maintained that vital action in the pulps has no influence upon the courses of caries, although I am somewhat of a sceptic on that point. Here, again, the high pressure of modern civilised life is an important factor, both as to the occurrence of caries in the individual and the transmission of degenerate teeth to the offspring. The constant whirl of excitement, whether in the pursuit of pleasure or gain, accompanied too often by the neglect of physical exercise, brings about a state of nervous exhaustion and frequent attacks of dyspepsia. And during all these periods how little work the teeth and jaws have been called upon to do with our modern cooking! This disuse of the masticatory apparatus acting through successive generations has produced degeneration and consequent proneness to disease. I have still one more predisposing cause to mention which ought not to be overlooked from a scientific point of view, though of little value from the practical side, and that is "natural selection." Men marry women with the ovoid face with narrow jaw, and not those with square massive jaws, and, further, those teeth of an azure colour and translucent appearance, which are so frail, are generally admired, not the strong yellow teeth.

I am, Sirs, yours faithfully,

W. SCOTT THOMSON, M.R.C.S., L.D.S. Eng.

Bentlinck-street, W., June 1897.

CANCER AND "MORBUS MISERIÆ."

To the Editors of THE LANCET.

SIRS,—In most modern text-books on gynecology reference is made to the alleged greater prevalence of cancer among the poor and ill-nourished than among those more fortunately circumstanced. This doctrine has lately received its apotheosis at the hands of Dr. Sinclair, who says¹: "My experience is that uterine cancer occurs only among the working classes; the apparent exceptions are so few that they are hardly worth discussing." Elsewhere he adds: "Cancer of the uterus is most frequently met with in the lower ranks of the people of all countries. So marked is the difference of incidence that it might be reasonably affirmed that if we could place all the lower orders who suffer from privation and depressing environment for a generation or two in the position of the more favoured, we should stamp out cancer." Against the acceptance of this misleading doctrine I would urge the following considerations:—1. During the last half-century the wealth of the country has more than doubled; its pauperism has diminished more than one-half; crime has steadily declined; sanitary conditions have greatly improved; the mortality from zymotic, tuberculous, and many other diseases has markedly diminished; wages have gone up, while the prices of most commodities have fallen to an extraordinary extent; the consumption of meat per head has more than doubled, having now reached the amazing total of 126 lb. per year; the bulk of the people are better paid, better housed, and better fed than ever they have been before—in short, just such conditions have prevailed as Dr. Sinclair alleges are necessary to stamp out cancer; but instead of having decreased during this period the *cancer mortality has more than quadrupled*, the uterus participating in due proportion. 2 The Registrar-General's reports show that the cancer mortality is *lowest* where the struggle for existence is hardest, where the conditions of life are most squalid, the density of population greatest, the tubercle mortality highest, the general mortality highest, and where sanitation is least perfect,—in short, among the industrial classes in our great towns; whereas among the wealthy and well-to-do, and among the agricultural community, there the cancer mortality is *highest*. The experience of those engaged in prisons, work-houses, and lunatic asylums points in the same direction, for cancer is comparatively rare among the inmates of such institutions, as it is also among the intemperate. Of like import is the great frequency of the disease in civilised communities, whereas among savages it is almost unknown. 3. The *ensemble* of facts relative to the life-history of cancer

¹ Allbutt's System of Gynecology, 1897, p. 657.

patients shows that they have almost invariably led regular, sober, and industrious lives. Persons of drunken and dissolute habits are comparatively seldom affected. Of 160 uterine cancer patients under my observation not a single one, so far as I could ascertain, had ever been addicted to prostitution; and, what is still more remarkable, only one presented undoubted signs of having had syphilis. The marked fecundity of uterine cancer patients, the rarity of sterility and abortion among them, all point in the same direction, for such conditions are of frequent occurrence in prostitutes and in the syphilitic. Such considerations as the foregoing seem to me to negative the doctrine of cancer being *morbis miseria*. They point to the greater prevalence of the disease among the well-to-do and easy-going, who habitually eat more than is good for them.

I am, Sirs, yours faithfully,
June 24th, 1897. W. ROGER WILLIAMS, F.R.C.S. Eng.

"UNQUALIFIED PRACTICE IN CORNWALL."

To the Editors of THE LANCET.

SIRS,—Referring to your leading article in THE LANCET of June 26th, will you kindly allow me to indicate two points which the President of the General Medical Council and his colleagues may press upon the President of the Local Government Board? The first is that the Select Committee of the House of Commons appointed to inquire into the subject of death certification reported some years ago, their first recommendation being that no death should be registered without a certificate from a duly registered medical practitioner or from a coroner after inquest. It is well known that the registrar has power to accept the best information he can get when no medical certificate is forthcoming and there are no grounds for referring the case to the coroner. It would surely only be reasonable to urge that the Registrar-General should give effect to the recommendation of the committee, and instruct his officer to refer every death not certified by a duly registered medical practitioner to the coroner. This would effectually close what is at present a most dangerous loophole for irregular practice. The second point is that which you have indicated near the end of the article: "It is high time that the whole system of unqualified practice in all its forms was more systematically studied by the General Medical Council." Liverpool has, like most seaports, swarmed with advertising quacks for the last forty-five years to my knowledge. These men practise and advertise with an effrontery which is evidently their strong point, and which would appear to recommend them to the public. One of these men was convicted some years ago of obtaining money by fraud, and was sentenced by Mr. Justice Day (who lamented that it was the highest sentence he could give him) to five years' penal servitude. His qualification consisted of a conviction for theft and of his having been for years a bill-sticker for another local quack, who fled to escape justice some years ago. Shortly after his conviction the name of a duly registered surgeon who had been associated with him in his infamous work was erased from the Medical Register; but so far from the establishment being broken up, as might have been expected, it flourishes more than ever, being kept up by the convict's wife, assisted by the ex-registered surgeon, whose name appears boldly on a brass plate as Mr. —, surgeon, and by a Dr. —, whose name also appears on a brass plate with the words physician and surgeon. The first name also appears as surgeon in two places in the local directory. It was stated at the trial that the convicts' receipts for years past had amounted to several thousands annually, and at a recent inquest on the body of a woman who had been under the care of Dr. — and Mr. — the weekly cash receipts were given and were very large. Is there no remedy for such a state of things?

I am, Sirs, yours faithfully,
Liverpool, June 28th, 1897. FRED. W. LOWNDES.

CYCLING FOR WOMEN: ITS EFFECTS ON PARTURITION.

To the Editors of THE LANCET.

SIRS,—Two cases that I have recently attended show that frequent bicycle exercise and continued pressure of a hard

saddle may act as a cause of delay in the second stage of labour. Both were primiparæ, of good physique, and accustomed to daily riding, in some cases long distances. The presentation was natural in each case and the labour easy until the head rested on the perineum, which was unusually tough and unyielding. The bowels and bladder had previously been emptied, and the child's head was of moderate size. After applying the usual remedies and waiting a considerable time delivery was quickly effected with short forceps without tearing the perineum in the slightest. It seems quite probable that long rides and the use of hard saddles caused the difficulty in these two cases, and it is as well perhaps that attention should be directed to the possible inconvenience and trouble which may result from an immoderate use of the wheel, and that care should be exercised in the choice and position of the saddle.

I am, Sirs, yours faithfully,
June 28th, 1897. J. W. McVITIE, M.R.C.S. Eng.

THE COUNTRY HOLIDAY FUND: AN APPEAL TO COUNTRY PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—Many of your readers are country readers. They must know of cottages where grown-up children have left empty places or where for other reasons there are rooms ready for guests. Would they tell of such rooms to the secretary of the Country Holiday Fund, 10, Buckingham-street, Strand? There are now some thousands of town children ready for holidays. They will enjoy them in the country, but they will enjoy them much more if they can, during their country visit, share the life of a country family, experience the different habits of living, and get familiar with the talk and life of those who have to work with growing things. The payment for each child is 5s. a week, and every precaution is taken that the child shall be free from all disease.

I am, Sirs, yours faithfully,
Toynbee Hall, Commercial-street, E. SAMUEL A. BARNETT.

* * If any of our country readers can give Canon Barnett the information he desires they may benefit some of their own poorer neighbours as well as the little people in whose particular behalf he writes.—ED. L.

"OBSERVATIONS UPON RE-VACCINATION."

To the Editors of THE LANCET.

SIRS,—In the "Observations upon Re-vaccination" which he communicated to THE LANCET of June 12th Dr. Robert Carter advocates that in small-pox epidemics every child in whose case four years have elapsed since primary vaccination should be re-vaccinated. I should not be disposed to question this conclusion of Dr. Carter's if he had urged in its favour that much vaccination performed in this country is of poor quality, and that in consequence it is expedient in times of small-pox prevalence to re-vaccinate all children after four years in order to secure immunity to those who have not received at the time of primary vaccination the highest degree of protection which vaccinia affords against attack by small-pox. Again, had Dr. Carter maintained his thesis on the ground that, as an occurrence wholly exceptional, children have been known to contract small-pox—though necessarily of the mildest type—within four years of efficient vaccination, the argument would have been sound, if not altogether convincing. But the reason which Dr. Carter gives is of a different nature. It is that he has found children susceptible to vaccinia, in greater or less degree, as early as four years after their primary vaccination. It would have been interesting to know whether any difference was observed in the reaction of these children to re-vaccination according as they presented good, bad, or indifferent marks of primary vaccination. But, setting this question aside, has it ever been seriously claimed that the duration of the insusceptibility to vaccinia which a vaccinated person acquires is the same as the duration of that individual's insusceptibility to attack by small-pox? The distinction between the two cases was pointed out by Jenner, and has been illustrated again and again in small-pox epidemics. It would be curious if evidence of the greater duration of the protection against small-pox attack could