extend over several years, with occasional amendments, followed by relapses upon any derangement of the general health. They may terminate either by the occurrence of a low form of inflammation, attacking some important organ to which the condition of the blood seems to afford much predisposition, or more gradually, with increasing dropsical distension, oppressive dyspnoea, and a soporose or comatose state, before the fatal event. The reports of this institution would furnish many cases of this kind, but I have not taken one for consideration, as the progress of such cases, till approaching dissolution, are very similar to that last mentioned.

(To be continued.)

OBSERVATIONS ON SCURVY

AS IT WAS DEVELOPED

IN BATH AND ITS NEIGHBOURHOOD, IN
THE SPRING OF 1847.*

By JOHN BARRETT, Esq., F.R.C.S.

(Read at the Quarterly Meeting of the Bath and Bristol Branch of the Provincial Medical and Surgical Association, December 21, 1848.)

A question of very great importance is, what are the external circumstances which produce scurvy, and very different views have been held on this point. I believe the most common view, and the most correct one, is, that it is the absence of an organic acid in the food. There are some facts strongly corroborative of this opinion. In Dr. Shapter's cases there was either an entire absence, or very deficient quantity, of potatoes and vegetables, used as diet; and he says,—“From all that has now been stated, we must come to the conclusion, that the recent occurrence of scurvy in Exeter is due to this one cause,—a deficiency of food containing acid principles, and that the potato has hitherto been the means whereby these acid principles have been supplied.” He adds, in a note,—“It must not be understood from this that scurvy is stated to be solely caused by a deficiency of vegetable food; scurvy is essentially a disease of depraved nutrition, and may be produced by a too restricted and exclusive use of any kind of food. In this paper I am strictly confining myself to the nature and origin of the disease now prevailing.”—*Provincial Journal*. 1847. p. 285.

In the scurvy at the Cape, as described by Dr. Murray, the soldiers had plenty of good fresh meat, but not of fresh vegetables, and yet it occurred.

When the scurvy appeared at the Milbank Penitentiary, in the year 1840, it attacked one class of the prisoners, entirely sparing others who were longer under confinement; and it is shown that this exemption of one class of prisoners from disease “could only be attributed to their weekly diet containing five pounds

of potatoes, and an onion;” and after the potato was used generally, the scurvy entirely ceased. To those affected, “three oranges were ordered daily for each prisoner, besides nutritious food.” Dr. Baly, who gives this report, brings forward a number of instances from the reports of the inspector of prisons, showing that where the diet has been devoid of fresh vegetables, and the potato, though otherwise not deficient or bad, there the scurvy has prevailed, disappearing when the potato has been used. “At the Huntingdon Gaol, the diet which hitherto consisted of fourteen pounds of bread, ten pints of milk porridge, and four pints of soup, made of meat and vegetables, has been improved by the addition of solid meat, but no increase appears to have been made in the vegetable portion of the diet. The last report of the prison inspector mentions that scurvy still occurs.” A man and his wife were under my treatment at the same time; they were not badly off; could afford, and did have, meat every day, but potatoes and fresh vegetables, from their high price, they had denied themselves for some months. They both recovered under the use of citric acid and plenty of fresh vegetables.

No case of land scurvy appeared at the Bath United Hospital;* there the patients were never debarred the usual allowance of potatoes. At the Bath General Hospital the disease did occur. Dr. Tunstall informs me that during the scarcity of potatoes, the diet was changed; twice a week, the patients had cabbage; twice a week, rice, and peas pudding; twice a week, bread and cheese. Potatoes were entirely discontinued in the hospital for about two months, from April to June. About this time the cases occurred. The other patients in the house evinced the effects of the change of diet; had house diarrhoea, and Bath Hospital tongue; were easily effected by remedies; soon salivated; would not bear such remedies as colchicum, or iodide of potassium, and during the whole year there was an anæmic type in complaints. There was not a tendency to hæmorrhagic complaints; purpura did not appear. The class of cases to which I have already referred, in which, though there may not have been the swollen, red, and bleeding gums, there was an anæmic state, attended with muscular or lumbar pains, &c.,—were quite common. He mentions three cases of scurvy.

1st Case. A drunkard, from Bristol, came in about April, with pains in the loins and lower extremities, stains on the extremities and in the course of the tendons. This was sent as a rheumatic case. Anasarca afterwards came on, and the man died in January, 1848.

2nd Case. Admitted as rheumatic; discharged as unfit. The scurvy was discovered after his discharge, but had existed whilst in the house. This case came from the country.

3rd Case. Admitted as rheumatic; discharged as unfit. From the country.

* Continued from page 153.

* See previous note, p. 149.

These cases followed an entire deprivation of the potato before they came in, and this want was not supplied to them on coming in.

The potato, during the high price, was discontinued at the Union House, and there, as I have stated, sixty cases of scurvy occurred. Mr. Gore considers it to have been caused by the absence of potatoes and other vegetable food, except rice and bread. The supposed causes may have been in operation about three months when the morbid effects were produced; but I am bound to say that the statements of some of my informants do not bear out this view. Mr. Harries, of this city, had about six cases of land scurvy, all of them among persons whose circumstances were not very low, who had plenty of food, and were not without the potato; but whether the potato was good he could not tell. These cases were marked by spongy bleeding gums, petechiæ, vibices in the course of the tendons, and rheumatic pains. None proved fatal.

Dr. Edwards says—"Most of the diseases I treated amongst the poor were, in 1847, (especially the early part,) peculiarly anæmic in type. The same was observed here in town I learn. The cases of land scurvy I saw were confined to the poorer class. I did not meet with any among the better class of patients I was in the habit of attending. My impression at the time was, that the want of the potato specifically was neither the cause of the disease, nor of the anæmic type I observed in other diseases, but rather the almost impracticable attainment of the ordinary supply and nutritious character of food from the high price of provisions, especially vegetables, and the general want of employment which existed in the early part of 1847, and, as a consequence, physical and mental depression."

Mr. Hutchins, of Keynsham, found scurvy confined to the poor, and where there was deficiency in vegetable diet. He considers that the causes of scurvy were partly a want of ordinary diet, and partly an adynamic state of constitution, and that several months' duration of these causes produced the effects.

Mr. Perrin, of Camely, does not consider the potato failure the cause of all the mischief; but the general high price of provisions did very serious and permanent mischief, and the potato got more than its fair allowance of discredit. My brother found the cases of land scurvy in the Tisbury Union confined to the poor, and they had generally been deprived of the potato. Dr. Lindoe found the cases of land scurvy occur chiefly among the poorer classes, and he considers them to arise from a deficiency of wholesome nutritious food, owing to the privation of their usual diet—the potato. The causes may have been in operation, he thinks, three or four months, when the morbid effects were produced. He also seems to consider the crowded, ill-ventilated state of the apartments of the poor a cause of scurvy. This was my own impression, particularly in the instance I have mentioned of the man

and his wife, who were under my care. When attending them in previous illnesses I have constantly urged them to keep their apartments well aired, but without success. They seldom moved out, and had an extreme horror of catching cold. The consequence was, that their rooms were oppressive and offensive.

It is a striking circumstance, that whilst only two cases of land scurvy are reported by the Union surgeons out of the house, Mr. Gore had sixty cases in the house, and the very week that he first mentions in his report the symptoms of the disease, he also says,—"The crowded state of the sick wards naturally attracts attention; it depends mainly on the accumulation of chronic cases, and calls for additional accommodation for such cases." And at the Bath General Hospital, where the disease did occur, the atmosphere is, probably from the vapour arising from the Bath waters which are introduced into the house, moist and unhealthy, and produces every now and then hospital diarrhœa.

It was observed to me by one of our relieving officers, that he thought one cause of the scurvy in our Union House was the alteration in the diet of the paupers on entering the house. Before entering they lived low, but were not confined to one food, and got occasionally a little gin, but in the house they had quantities of oatmeal. It may, I think, be at once allowed, that whatever tends to either mental or physical depression, will be favourable to the production of scurvy, but I question whether any cause of this description could be in itself sufficient, without the absence of a supply of organic acid in the food. There was want and illness enough last winter, and the influenza produced a peculiarly distressing effect on the general health during the winter, and indeed in its results long after it had ceased to be talked about; but though I believe there have been some cases of land scurvy this year in this neighbourhood, they have been very few. The price of the potato was high last winter, but not so high as before, and vegetables were tolerably plentiful. I should have remarked, that in the Bradford Union House it was confined to the children, and principally to those between the ages of four and twelve. The men, women, and those children who were of an age to be much in the open air, remained, with few exceptions, free from it, whilst Mr. Highmore says that not one case occurred in his practice out of the Union House; and taking fourteen consecutive cases from our Union House report, in June, I find that two of them were aged 35 and 44, whilst five were above 59, and seven below 10, years of age. Of five consecutive cases in July, one was 35, and four were above 60 years.

Those who witnessed the disease which appeared in this neighbourhood in 1847, and have referred to the account given by Dr. Shapter, of that which appeared about Exeter at the same time, will, I think, entertain

no doubt that whatever may have been the cause, they were the same; and that they answer to the disease which has been described by standard writers as sea or land scurvy. Mr. Highmore found in his cases at first almost invariably pain and heaviness in the head and weakness of the legs, many being confined to bed unable to stand before the gums became diseased. Petechial blotches, particularly on the legs, appeared in most of his severer cases, with the swollen and bleeding gums. Some of the earlier cases were ill for a very prolonged period. I observed the joints to swell, and, as I have stated, in one case to put on the usual marks of synovial inflammation. The belly became tumid. One woman applied to me to confine her, thinking she was in the family way; the citric acid cured her. Some cases terminated fatally in phthisis in a few months; and others, particularly the old, seem never to have recovered the shock, but gradually sank, though the direct symptoms may nearly entirely have disappeared. Indeed, in judging of the fatality of such a disease as land scurvy, we must not take into consideration only the cases of death, attended with its generally recognized symptoms, but must remember that where these have been overcome and the patient apparently restored to at least convalescence, other diseases have supervened, and their fatality has been determined from the shock originally given by the land scurvy. So it is in influenza: its mortality would be very inadequately estimated by the deaths occurring during its prevalence; and thus it may and does happen sometimes, that when mortality is high, the amount of prevalent disease is low, a coincidence which occurred this autumn in the district for which I am registrar and parish surgeon. In addition to the spongy bleeding gums, Mr. Perrins's cases in the advanced stage presented sloughing of the cheeks to a frightful extent. Dr. Samuel Edwards informs me that in several *post-mortem* examinations about this time, he observed extravasations of blood beneath the serous coat of the intestines and abdomen, in which such appearances were neither anticipated nor usually found. Similar to these observations is a case my friend Mr. Field has sent me an account of.

A female, pregnant with her first child, in the last month of her pregnancy, was severely afflicted with diarrhoea, and was much debilitated thereby. Labour came on but proceeded rather slowly; blood was passed per anum and she sank before delivery. On *post-mortem* examination blood was found effused under the peritoneum covering the front part of the uterus, and the corresponding portion of the abdominal parietes, in maculae, such as are observed in purpura. The same appearances were also noted under the pleura and the pericardium covering the heart. The woman was between twenty and thirty years of age, was not an emaciated subject, and had not lived badly according to report. There was nothing wrong in the uterine cavity.

Mr. Highmore gives an interesting case of what the

sailors call bullock's liver in scurvy. He amputated the great toe just previously to the scurvy breaking out, at the centre of the metatarsal bone, in a patient aged 50. The case progressed favourably for a few days, then a fungous, livid, bleeding mass grew from the surface of the wound, becoming as large as a small orange in a month. All attempts to check its growth or set up a healing process failed. There was no altered appearance of the gums, but on being supplied with the lime juice, the patient lost the pain which had previously required large doses of morphia to allay it, the tumour disappeared, the part became healthy and healed.

Though the recognized cases of land scurvy may be few compared with the population, yet I think sufficient has been said to show that a scurvy diathesis did prevail during, but particularly at the beginning of, the year 1847, producing a serious effect on the general health, and giving a dangerous type to other complaints. Dr. Budd makes a remark of the deepest importance:—"Such a condition of the system,"—i.e., the scorbutic taint, "would necessarily modify the character and course of supervening acute diseases; and it is worthy of the most diligent enquiry, whether that form of scarlatina designated by the epithet *maligna*, and analogous types of other eruptive diseases, may not, in some cases, owe their peculiar aspect and character to the circumstances of a scorbutic taint already existing, when the system becomes subject to the specific poison of these several diseases." He adds in a note,—"A fact which renders this probable is, that these types prevail most during and at the close of long winters." "We may here notice the extraordinary prevalence of typhus in the severe winter of 1837-8, and the petechial character of that epidemic. Sir G. Blane has remarked, that the low spotted typhus is always most prevalent in long and severe winters. Willan states also that the malignant form of scarlatina is usually limited to the winter months." The following paragraph from Huxham's "Essay on Small-pox," may also bear on this subject:—"I have never observed either the *vegetable* or *mineral acids* of any great service in the crude crystalline pox, but I have found them highly useful in the small, black, confluent kind, with petechiae."—*Lib. of Med.*, p. 92.

Few circumstances are more wonderful in the history of man, than the capability he has shown of bearing the severest suffering. Truthful indeed is the language of the Greek dramatist—

"Οὐκ ἔστιν οὐδὲν δεινὸν ὃδ' εἰπὴν ἔπος
οὐδὲ πάθος, οὐδὲ συμφορὰ θανάτου,
ἢς οὐκ ἂν ἀνὰλ' ἀχθος ἀνθρώπου φῦσις."

But he might have added, that not only is man capable of bearing the severest calamity, but he is even more capable of forgetting what he has borne, and of neglecting to provide against its recurrence. How pregnant is the history of land scurvy with proof of

this; though it had prevailed to such an extent, that at the end of the 16th century Sir R. Hawkins informs us that he could give an account of 10,000 mariners consumed by scurvy alone in the twenty years that he had been at sea;—that “Admiral Hosier, who set sail in the month of April 1762, with seven ships of the line, for the West Indies, buried his ships’ companies twice, and died himself of a broken heart in consequence;”—that “we are told by Dr. Lind, that during the war which terminated in 1748 in the peace of Aix la Chapelle, scurvy proved more destructive, and cut off a greater number of lives than the united efforts of the French and Spanish armies, yet it was not till 1795 that a regular supply of lemon juice was first granted to the British navy, when the mortality fell suddenly, and to a degree scarcely credible.” Between the years 1799 and 1813, the diminution of sick and of deaths in the British navy was in the proportion of four to one nearly. It was not that the means of preventing this fearful sacrifice of human life had not been long discovered, for Roussens, one of the earliest writers on scurvy, in a work published in 1564, observes, “that seamen in long voyages cure themselves of it by the use of oranges.” Sir R. Hawkins used the lemon juice in the 16th century. Lind’s “Treatise of the Scurvy,” which is still the standard work on the subject, was published in 1753, and indeed so well known was the remedy against scurvy, that Lord Heathfield, the Governor of Gibraltar, gave a family connexion of my own, Conway Heighington £500, obtained him the rank of Lieutenant in the Royal Navy, and presented him with a medal, which I have in my possession, “as a testimony of his Lordship’s high opinion of his nautical skill and bravery in getting into the relief of Gibraltar, several times during the siege, particularly on the 2nd of Feb., 1782, with a cargo of lemons for the sick of scurvy, under the heavy fire from a frigate of thirty-six guns, a zebec of eighteen, and four gunboats”—that is fifteen years before the Admiralty listened to the earnest advice of a medical man, and ordered that in future our sailors should be provided with lemon juice.

It is to be feared that we are acting in something the same manner; the potato crop has now failed three or four years, and it cannot be doubted that its failure has been one cause of the occurrence of scurvy, perhaps of other diseases, yet we have hardly attempted to find a substitute. Nay, more, it would seem from Dr. Baly’s paper, published in the *Medical Gazette*, Vol. xxxi., that though mention may not be made of its occurrence, the land scurvy is by no means unfrequent in some of our prisons, and that a diet which has been repeatedly shown to be productive of it is continued. It has been rather the fashion during the last year or two to raise an outcry against the potato. Some prophecy of Cobbett’s has

been quoted, and that which I verily believe has been the greatest friend our poor ever knew in the shape of food, is now treated with contempt, and we are bid to think of some farinaceous food in its stead, such as Indian corn. This condemnatory opinion finds support in that part of “*Turner’s Chemistry*,” lately published under the care of Liebig, from which I copy the following passage:—“Man being omnivorous, his mixed food contains all the constituents which are required for nutrition and respiration.” The researches of Dr. N. D. Thompson have demonstrated that the most favourable proportion between the albuminous or azotized and the saccharine or non-azotized constituents in the food of animals is, that of one part by weight of the former to seven or eight of the latter. This proportion exists naturally in the most nutritious food, such as grain, while in such food as potatoes the amount of albuminous matter is much too small. Hence potatoes alone must be regarded as very inferior in nutritive power to wheat, oats, rye, or maize, equal weights being compared.”—(“*Turner’s Chemistry*,” p. 1321.) Now, however high this authority may be, I must venture to say that my own observation some years ago, in an agricultural district, led me to believe that in reality were our poor to be confined to one kind of food, either bread or potatoes, they would prefer potatoes as the most palatable, and in the long run most nutritious, food of the two; and I do think that there is now abundance of evidence to prove that one necessary constituent of good food is an organic acid. The farinaceous seeds, as wheat, barley, oats, and rye, which are destitute of antiscorbutic property, contain no organic or vegetable acids; but “the various fruits, succulent roots and herbs, which have the property of preventing and curing scurvy, all contain, dissolved in their juices, one or more organic acids, such as the citric, tartaric, and malic acids. Sometimes these acids exist in the free state, but more generally they are combined with potash or lime, or with both these bases. Now, potatoes have been submitted to most elaborate chemical examination by Einhoff and Vauquelin, and by both these chemists they have been found to contain a vegetable acid in considerable quantity. According to Einhoff this acid is the tartaric, combined with potash and lime. According to Vauquelin it is the citric, partly in combination with those bases, and partly in the free state.”—(Dr. Baly, &c., *Medical Gazette*, Vol. xxxi., p. 703.)

In the same volume of the *Medical Gazette*, from which I extract the above, is a communication from Mr. Peppercorne, bearing testimony to “the great efficacy of sound and fresh potatoes in the prevention and cure of scorbutic disease amongst the French seamen.” They were given raw. And in a little work, “Two Years before the Mast,” which has all the appearance of being what it claims to be, an authentic narrative, there is a very interesting account of the scurvy on board an

American vessel. They fell in with a vessel which supplied them with fresh onions and potatoes, and these speedily cured them. One man, in a most deplorable condition, who could not chew the onions, had the juice of the bruised raw potatoes and onions given him. "This course soon restored his appetite and strength, and ten days after we spoke the *Solon*, so rapid was his recovery, that from lying helpless and almost hopeless in his berth, he was at the mast head furling a royal." The writer says,—“This disease is not so common now as formerly, and is attributed generally to salt provisions, want of cleanliness, the free use of grease and fat, (which is the reason of its prevalence among whalemén,) and, last of all, to laziness. It was probably from our having none but salt provisions, and from our having run very rapidly into hot weather, after having been so long in the extremest cold.” He says that medicines would have been of no use,—their's were exhausted,—“for nothing but fresh provisions, and *terra firma*, has any effect upon the scurvy.” How striking a proof is this of the amount of ignorance still prevailing on this subject, even amongst those most interested in being acquainted with it as most subject to its evils; and it shows that the neglect of merchants to provide their ships' crews with the preventive of scurvy, is not peculiar to this country where Dr. Budd has animadverted on it, but extends to America, and would really seem to arise, in some measure, incredible as it may appear, from ignorance of it.

But may not the potato derive its great value partly from another circumstance? I have long considered it a stimulating food, and that it derived its value in a great measure from this. Now, it belongs to the same natural order as the capsicum; and if the doctrine of homomorphism be true, “that plants, having similar structures, have similar properties likewise.”—*Burnett's Botany*, p. 985.) May it not possess some of the stimulating properties of the capsicum? “It is a fact,” says De Candolle, “which should never be lost sight of, that all our aliments contain a small proportion of an exciting principle, which, should it occur in a greater quantity, might become injurious, but which is necessary as a natural condiment; and that, when this stimulating principle is naturally in very small proportion, we increase it by art, or supply its place by the addition of spice”—*Burnett's Botany*.

There is a way in which the potato is used which may not have been thought of, but which I think may have much to do in preserving public health,—I mean mixed with wheaten flour in bread; I believe very few bakers omit to use it, and perhaps we may have acted unwisely in condemning this adulteration. One of the questions I put to my correspondents was, “Do you consider that the potato, as an article of diet, may be safely dispensed with?—or can you suggest any sufficient substitute? Do you consider that rice would be?” Mr. Gore says, that the impression left on his

mind was, that vegetable food is indispensable to health, and that the potato is one of the best or most convenient forms. The inmates of the Union House soon absolutely loathed rice. And his observations on these circumstances strongly confirmed a previous opinion, that rice is a very poor and inadequate article of diet. Mr. Lloyd says, that potatoes *cannot* be safely dispensed with, there is no good substitute for them; rice is a bad substitute, and produces disease of the mucous membrane of the bowels. Dr. Tunstall looks on bread and cheese as the best substitute for potatoes. Dr. Lindoe thinks that in warm climates rice might be found a useful substitute for the potato, but in England he is not aware of any vegetable that could supply its place. Mr. Hutchins does not consider that rice would be a safe substitute for the potato; thinks bread would suit the English constitution; finds peas, and grits, and salted meats, readily induce obstinate skin-disease; and carrots and parsnips do not well agree as a work-house diet without some bread. Rice, with broth or soup, and a small quantity of bread, he finds makes a very wholesome and palatable meal. Rice, even with treacle, is seldom liked; suet pudding, or bread and cheese, is always preferred. Mr. Perrin considers parsnips nearly as good as potatoes, though not near so palatable; rice will never be used, from the strong aversion the poor have to it. My brother believes that potatoes may be dispensed with, provided in their place we use some fresh succulent vegetables, as turnips, carrots, celery, cabbage, &c. In the Tisbury Union House, when the potatoes were becoming scarce, and the diet table was altered, he requested that turnips, carrots, or greens, might be given twice a-week, and potatoes once, and not a single symptom of land scurvy occurred to any inmate. He also found that those in his district who had the first symptoms of the disease, were speedily relieved from them by a vegetable diet. Rice he believes to be useless as a preventive of land scurvy, because in the Crediton Union, where it was an article of diet, several cases of land scurvy occurred. The same weight of boiled rice had been substituted for potatoes in that Union House. Mr. Shorland considers it most inadvisable that the potato should constitute, as heretofore, the general diet of the lower orders, but as an adjunct considers it preferable to rice.

(To be continued.)

CASE OF PESSARY IMPACTED WITHIN THE VAGINA FOR TWO YEARS.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

Conceiving the following case of impacted oval box-wood pessary within the vagina for the space of two years, with the singular and simple method employed