

ST. THOMAS'S HOSPITAL,
CLINICAL LECTURE
DELIVERED BY
DR. ELLIOTSON,
Jan. 24, 1830.

VARIOUS CASES. — MERCURIAL DISEASE—

IMPETIGO—CHRONIC BRONCHITIS, &c.

ONE of the cases which were presented last week, Gentlemen, was of so much more importance than any of the rest, on account of its rarity, that I intend to devote the chief part of the lecture this morning to it, and will speak in a more cursory manner of the others. The case I allude to was that of *scurvy*, which I showed you in the theatre when we last met.

Respecting the other cases, I would briefly mention that they were seven in number ; three of them cases of rheumatism ; two of that peculiar state of the system which is seen after syphilis and mercury, and which some persons call a mercurial disease and others a pseudo-syphilitic state,—one that is not very well understood, and the treatment of which is by no means satisfactory, though

taste it ; and that the other had been divided among the whole crew of thirteen, and was a very little pig, so -that -each had but a mouthful or two. With that exception he had eaten nothing but saltbeef and salt-pork on board for seventeen weeks ; so that you might almost say he had had no fresh meat at all. They had no lemon-juice on board nor citric acid, nor any medicine of any kind, nor a doctor. His appearance you saw last Monday ; there were petechiæ on different parts of the body, particularly on the legs ; spots and specks innumerable, of a very purple and dingy-red, down the thighs and legs. You observed that on the inner, and lower part of the thighs there were large ecchymoses, large black and blue patches, as though he had been severely bruised. You observed, likewise, that there was considerable hardness there ; the thighs felt there as hard, as a board. His gums were a little affected, not materially. The fact, I believe, was, that he was already much better when he came into the hospital. He said his gums had been very bad ; that his mouth and breath had been very offensive ; and that his gums had been so severely affected that he must have lost altogether about a pint of blood from them. He felt exceedingly weak ; his spirits were very much depressed, and the stiffness and pain of the thighs made him lame. When he came here he had had fresh meat for a week : he had been so near shore for a week, i.e. after his arrival in the Downs, that he had had an allowance of fresh meat and had improved considerably. The day on which he was admitted, it was necessary for him (for the purpose of making some arrangements) to go out again, and he had to walk some distance. Through the exertion the inside of his thighs became very much more ecchymosed and hardened than before ; they were dreadfully hard ; in fact the insides of his thighs were little more than one great mass of ecchymosis and perfectly unyielding substance ; the stiffness had become so great that he walked very lamely, being unable to extend his left knee.

Symptoms.—The usual symptoms of scurvy, as you will find them stated in books, are petecchiæ, vibices, and ecchymoses; petecchiæ being, as you know, the most minute, the vibices larger, and the ecchymoses being the size of bruises. You will find likewise mentioned, that the thighs particularly are very hard. Where the case is severe, there is always induration of the thighs. The surface of the whole body, too, is in severe cases swollen, and the person altogether looks very unhealthy—bloated. If you examine the gums, you find them to be spongy, and the teeth fall out. This man's teeth were loose, so that you could move some of them about ; he said they had all

I proceed, however, to the case of

SEA SCURVY.

Robert Haines, aged 25, was admitted on the 13th of January, with scurvy. He said he had been ill a month ; that he had that morning landed, after having been seventeen weeks on his passage in the Lavinia of London, from Buenos Ayres hither ; that he had had salt-beef and salt-pork all the passage, together with bread ; that two pigs had been killed on the passage, one only so recently as Christmas-day, when he had been ill some time, and was not able to

been quite loose before he obtained fresh meat. The gums sometimes are exceedingly swollen, and of quite a fungous appearance. I recollect distinctly, when a pupil, seeing a man with scurvy that had been to one medical man, and had taken out several teeth for him. He had been also to a very eminent surgeon, who had pronounced it a case of cancer—a case of fungous hæmatodes of the gums. Now all these blunders arose from a case of scurvy being so exceedingly rare—so rare, that many even in the navy have never seen a case. It is necessary, therefore, that I should on the present occasion particularly draw your attention to it, for though some of you may never meet with a case of the kind, yet others may meet with one, and if you had never seen such a case, you might treat it as the case I have mentioned was treated, and pull out the tooth; or you might despair of curing it—consider it a hopeless case, and let the patient die; whereas by recognising the disease, you will be able to cure it with the greatest ease. It is on this account that I consider the present case the most important of the set.

There are also mentioned in books, depression of spirits, general weakness of the body, and absolute fainting. There is such debility, that persons cannot get out of bed, and the least effort will make them faint, and the pulse, under such circumstances, is feeble. This man was low-spirited, weak, and faint, and his pulse feeble, and the surface of his body cold. It frequently happens, too, that there are ulcers upon the surface of the body, and these discharge a thin, fetid, bloody fluid. The discharge from them is as fetid as the breath and the discharge from the gums, and, at last, what was a bloody fluid, becomes, both in the ulcers and in the gums, real blood—coagulated blood, which is separated with considerable difficulty, and after you have removed it, you find the parts below, dark, soft, and spongy; for the solids of the body, as well as the fluids, become affected, and if you remove this coagulum of blood, it is instantly renewed, and at length a fungus sprouts out, and will spring up as fast as you cut it away, just like a case of fungus of the brain after an injury to the head, where the bone has been fractured and a fungus arises, and is reproduced as fast as it is removed. This is culled, in the case of scurvy, by sailors, *bullock's liver*, from its resemblance, I suppose, to that organ; and many of those funguses acquire a monstrous size. If you repress them by pressure, a gangrenous tendency is observed, the less will swell, grow spotted and painful, and mischief is produced. You know, too, that in the case of fungus from the head, if it is compressed carelessly, and without precaution, comatose symptoms will come on, and death,

perhaps, result. So it is in scurvy,—if you compress the fungus, you give a tendency to gangrene; you produce swelling of the extremity, which will also grow much more spotted than before. Any part of a person labouring under scurvy, may, if bruised ever so slightly, become ulcerated, and when an ulcer is produced, it assumes the characters which I have already described to you. Old wounds in this disease will break out afresh, showing that those parts of the body which have been once injured and repaired, are still weaker than other parts. Not only so, but the callus of bones that have been broken will soften down, and the solution of continuity again occur. A very extraordinary symptom sometimes takes place in this affection, which one would not be prepared to expect, and that is nyctalopia. It has been spoken of, for example, by Mr. Bamfield, who practised abroad, and by Sir Gilbert Blane.

Cause.—Respecting the causes of this disease, the case before us as fully illustrates the cause as the symptoms of the affection. It is always, I believe, a want of fresh animal and fresh vegetable food; consequently it was formerly very common at sea, where there were not fresh, but salt provisions, and bad management. So great was the havoc by this disease in former times, that Lord Anson in 1741 lost one half of his crew in six months: 961 sailed with him, and of the 961, 335 only were alive at the end of the year; at the end of the second year, of the 961, 71 only were fit for the least duty,—not for any, but for the least duty. Formerly deaths were so common, as to amount to eight or ten every day in a moderate ship's company; and bodies sown up in hammocks, lay washed about upon the deck for want of strength and spirits on the part of the miserable remaining sufferers, to cast their old shipmates overboard. Formerly, too, it was common in London, so that in the seventeenth century from 50 to 90 deaths were stated in the bills of mortality as occurring annually; and in the year of the plague, 105 deaths took place.

I might also give you another illustration, of its prevalence in the navy by stating, that in 1726, Admiral Hosier sailed with seven ships to the West Indies; that he buried his ships' companies twice, and then died himself of a broken heart. You will find in Roderick Random, and in Smollett's History of England, a good account of the mode in which sailors were supplied formerly with food. Smollett gives an account of the armament that was fitted out to Carthagena, much about the same time at which Lord Anson's voyage took place; and he says the provisions, consisted of *putrid salt beef*,—to which the sailors gave the name of *Irish horse*,—(I suppose the contractors

lived in Ireland, and that it looked like horse-flesh),—salt-pork and musty bread. The salt pork came from New England, and was neither fish or flesh, but savoured of both. The bread came from the same country, and every biscuit was like a piece of clock-work, moved by its own internal impulse, occasioned by the myriads of insects that dwelt within it. As to their butter, it was served out by the gill, and exceedingly like train oil thickened with salt. You cannot wonder, then that the men should have the scurvy. He also adds in proof of the bad management, that though there was water enough on board for every man to have half a gallon a day for six months, each was allowed only a purser's quart, in the torrid zone, where a gallon would have been hardly enough to repair the loss by perspiration.

As regards the cause of it in England in former days, the food was very different among the common people to what it is now. They lived on salt-beef and pork, and veal. The lower orders of society had very little else in the time of Henry the Eighth. Land was then but very little cultivated ; the chief were pasture lands ; and even hay was not made as extensively as it is at present. The consequences of all this was, that the cattle were all killed as soon as they were fattened, or ready for killing, and salted. Beef and pork were salted, and put up as provision for the winter ; no more cattle were killed during the winter ; for there were little means of supporting the cattle after the grass season was over ; every-thing was salted at the beginning of winter, and the people lived during the winter on the cattle so killed and so salted. In those days, too, there was hardly any garden stuff: for, in 1700, a cabbage cost three-pence, which, in 1760, cost only a half penny. Other greens were at first proportionally dear ; and garden stuff was only used then as a dainty, when people had company. Queen Catherine, of Arragon, one of the numerous wives of Henry the Eighth of blessed memory, in the beginning of the sixteenth century, had actually a gardener sent for from the Netherlands to raise her a salad, there not being a man in England who could at that time manage such a matter. It is also said, that in Henry the Eighth's time, the price of salt-meat was fixed at one-twentieth, and wheat at one-tenth of the present prices, because salt-meat formed the chief support of the people, and the attention of government was directed principally to it, for the purpose of affording a cheap supply to them. However, it is not the salt-meat that produces the scurvy, nor is it putrid meat; for the disease will occur where there is no salt-meat used nor any meat at all. It is

not owing to this kind of meat being eaten but through fresh meat and fresh vegetables not being eaten, that scurvy is produced. It is the want of other food—the want of fresh animal and fresh vegetable food. You will find in the second volume of the Transactions of the College of Physicians, two cases, published by Sir Francis Milman, of women who had the scurvy in the country (I think Derbyshire), who had eaten no meat at all, but lived merely on tea and bread and butter, having formerly been accustomed to better food. I myself had a poor man in the hospital with scurvy in January, 1828, who had fallen from good circumstances into the most abject poverty, and lived on tea and gruel for some time. I may remark that sea and land scurvy are the same, though once considered different. Other cases of the kind I might refer to ; for many persons have had the scurvy who have had no salt meat, who have had no putrid meat, but who have been merely living in a state bordering on starvation.

It is also mentioned by writers, that the scurvy was not only common in London (as you might well suppose from the food I have mentioned) ; but in a work published in 1703 by Dr. Musgrave on the Gout, it is said to have been common in Somersetshire ; and we read in Pliny that it prevailed in the Roman armies when in Germany, and in the armies which served in the wars impiously called, like some other things, holy.

Predisposing causes.—Although this want of fresh animal and fresh vegetable food appears to be the cause, yet many other circumstances increase the tendency to scurvy. Cold, and want of exercise, greatly predispose to it. This is proved by the fact, that sailors will suffer it in cold climates under all the other circumstances in which they escape it in warm climates. As to exercise, Sir Gilbert Blane mentions that the prime seamen only of a ship's company used to suffer, who were excused from working the pump, the ship being leaky; while those who worked it escaped. Captain Cook informs us, that the Kamschatkans who are habituated to hard labour have no scurvy, while the Russian and Cossack in garrison are indolent and subject to it. The disease was first particularly noticed. in 1497, in the men of Vasco di Gama.

The difference in ships' crews now and formerly, as regards scurvy, is very striking. In the two accounts of Lord Anson's voyage and Capt. Cook's, you will find that while Lord Anson's crew suffered in the way I have mentioned, Capt. Cook's, in going round the world, suffered nothing, because they had a good supply of portable soup, sour craut, and fresh meat. They were kept regularly exercised, extreme cleanliness and proper ventilation attended

to 5 and they were only out about three weeks at a time on their longest cruise, though absent so long.

Treatment.—The *remedy* for this stato is fresh food, vegetable and animal food, and particularly lemon-juice. With respect to the man whose case I have been considering, I gave him no medicine ; the case was not so severe, but that I felt satisfied a change to healthy diet would entirely cure him. If I had given him lemon-juice, no inference could have been drawn as to the virtue of it, for, of course, it was my duty to give him proper food.

Scurvy is a disease (if any disease is)purely *chemical*. The body, structure, and functions are not in the least in fault; in one sense, each part of the system is ready to perform all its functions, but one of the external things necessary for its doing so is taken away. In the case of *suffocation*, the body is not at all in fault, but it suffers from a want of fresh air ; so in scurvy, the functions are all right, but the food which the body by nature requires, is withheld from it. Give the body this proper food, and it will make proper use of it; give it a good sound raw article, if I may so speak, and it will manufacture properly, and the diseased state will disappear. This is very different from the state of some other cases in which chemical remedies have been employed. For example, you know that in cases of softness of the bones, some have recommended a good supply of bone earth—of phosphate of lime, as though the bony substance was only wanting. Here there has been no want of proper supply of any-thing, but the system is wrong, and give it what phosphate of lime you will, that will not put the body in order. The disease does not consist in a want of bone earth, but in the want of the proper functions which make the bone, or evolve it from the materials they receive. So in the case of diabetes ; it is not that the body is overloaded with an excessive supply of sugar, or been deprived of a due quantity of animal food, but that the functions of the body which form the compound fluid called urine are diseased, that occasions the diabetes, in which sugar appears, and urea, lithic acid, and salts, are deficient; and yet you may keep a person exclusively to animal food, but very rarely I believe cure diabetes in that way. You may assist somewhat by giving only animal food, in making it more difficult for the diseased function to manufacture the peculiar urine, but as to curing it by animal diet, I believe that, in general, you will find this impossible—I, at least, have found it impossible.

To take a chemical view of such affections is not even countenanced by chemists themselves. The case of scurvy is exactly like the case of impending suffoca-

tion—the body would be in good health if not deprived of its proper external supply. I therefore gave this man fresh diet, and he at once became well ; fresh meat every day, and fresh vegetables twice a day—greens night and morning, for farinaceous vegetable food is insufficient. An improvement was visible every day ; and, in fact, in four or five days after I allowed him to you he felt so well that he would not remain in the hospital any longer, but determined to lose no time in going into the country to his friends whom he had not yet seen ; he felt that he had nothing to do but to live out of the hospital as he lived in it, and then that he would get rid of the very slight remains of the complaint that were still perceptible.

The power of lemon-juice over the disease is said to be very great—its effects speedy and marvellous. The compiler of Lord Anson's voyage, seeing the dreadful appearance of the body in this disease, seeing how fatal the disease was, and how horridly it disfigured and disabled the body, making it a loathsome offensive mass of corruption (perhaps more than any other disease whatever), declared that a cure was impossible by any remedy or by any management that could be employed, and no hope of ever curing it could be entertained; and yet now we know that such a state as that may be at once removed by a change of diet, and by a little lemon-juice ! This circumstance, I confess, gives me great hope of the improvement of our profession. Many diseases certainly can now be cured which were formerly considered hopeless, from our sounder pathological views. By looking out for inflammation for example, generally, and by treating it vigorously arid steadily, we cure any affections that formerly were despaired of (for inflammation is now known to be the foundation of numerous diseases). There can be no doubt also that a number of drugs, both mineral and vegetable, have greater power over diseases than is yet known. I consider the marvellous effects of lemon-juice in this, the most horrid state of the body that can be well conceived, sufficient to justify a hope that a number of drugs may be known in the course of time that may cure a number of diseases, which even at present appear to us to be hopeless. Let me again mention that formerly the scurvy appeared to be entirely incurable, and the attempt to cure it absolutely ridiculous.

The power of lemon-juice over this affection is said to have been known two hundred years ago. It is said to have been mentioned in a book called *Woodall's Surgeon's Mate, or Military and Domestic Medicine*, by *Johm Woodall, Master in Surgery*, which was published in 1636 ; and he ends his praises of it by saying he dare not write how good a sauce it is at meat, lest

theo chief in the cabin should waste it to save vinegar. It is said even to have been known earlier, and been mentioned in Purchass's Pilgrim, published in the year 1600 ; and yet, notwithstanding all that, it appeared to have been almost forgotten. And this is again a very instructive circumstance to us. It teaches us not to despise a medicine without very good reason. If a medicine is recommended on good authority, we are bound, be the authority old or new, to ascertain whether what is said of it is true, unless we have other medicines that fully answer every purpose. I have no doubt that many medicines were once used and are now forgotten, which would be very good in certain cases, or certain stutes of cases, and have been thrown aside without any reason whatever. As to the colchicum, when I was a pupil, I recollect that it was not employed—I never saw it used,—I heard it mentioned undoubtedly in lectures, but as a remedy that was highly dangerous, and yet this is as old a medicine as there is in the Pharmacopœia, praised by very old writers for its powers of cleansing the joints, in short for its power in gout and rheumatism. The lemon juice was, though so well appreciated so long ago, so little known an a remedy in scurvy in the last century, that Sir Gilbert Blane states (and his select dissertations, as well as his other writings, are full of excellent information) that when the London College of Physicians was applied to by Government for a remedy in scurvy, they advised the use of vinegar, which has very little power : and that in 1755 a Fellow of the College wrote a book on the subject of scurvy, and never even mentioned lemon-juice. It was owing to Dr. Lind chiefly that the knowledge of lemon-juice was revived. Above a century after Woodall published, he stated its peculiar power.

The Navy, however suffered very severely from scurvy till 1795, when Lord Spencer, the father of the present Chancellor of the Exchequer, was at the head of the Admiralty, and at the recommendation of Dr. Balir and Sir Gilbert Blane, established a full supply of it to the Navy ; in which from that time scurvy has been scarcely known. Such has been the difference of the disease that though so late as in 1780, nearly two centuries after the publication of Purchass's Pilgrim, there were 1754 cases of scurvy in Haslar Hospital, in 1806 there was but one, and in 1807 but one !

I believe that the lemon-juice itself is considered more efficacious than the citric acid. I, of course, can speak from no experience of my own, but some people imagine that the lemon juice itself is more efficacious. It is preserved very well, I believe, by putting about one-tenth part of spirits to it. All the Hesperidœi have the same virtue,—

the lime, the Seville and unripe China orange ; malt and sour crout are also thought good. An ounce of lemon-juice with an ounce and a half of sugar daily is the navy allowance ; arid now scurvy is never known on the longest voyage, unless in an instance of gross neglect, like that of the man whose case I have now considered. Before the supply took place which is now served out, the average of patients sent to hospital was in the preceding nine years, one third of the whole Navy. In the succeeding nine years but eighty-four cases occurred.

I may mention as a good illustration of the use of lemon-juice, that *The Suffolk* left England in April, 1794; that she had no communication with land for twenty-four weeks, and yet only fifteen of her crew were slightly sick, and wore soon cured by an augmentation of the usual allowance of two-thirds of an ounce, and not one had the scurvy on her arrival. In 1800 the Channel Fleet had no fresh provisions for sixteen weeks, but plenty of lemon-juice, and not a case of scurvy occurred; whereas, in 1708 the Channel Fleet could not keep at sea beyond ten weeks, and was worn out with the scurvy and fever.

The best application to the ulcers is also the lemon-juice,—a slice of lemon, as Pere Lebat appears to have pointed out in his voyage to the Antilles. Pain in the breast and limbs is often felt during the, scurvy, especially, it is said, if rapidly cured by lemon-juice.

In 1600, on the 2nd of April, Commodore Lanchesterr sailed from England with three other ships for the Cape of Good Hope, and arrived at Saldanha Bay on the 1st of August, the Commodore's own ship being kept in perfect health by the administration of three table-spoonfuls of lemon-juice every morning to each of his men ; whereas the other ships were so sickly us to be unmanageable far want of hands, and the Commodore was obliged to send his own men on board to take in their sails, and hoist out their boats.

With respect to the time at which the scurvy begins, I think this man began to have the disease at the end of five or six weeks. He told me, but I have not made a note of it. Sir Gilbert Blane (to whom I myself, and Mr. Herschell evidently also, am much indebted for information on this subject) says that the disease usually begins on the 6th or 7th week of sea victualling. Some have of late doubted whether the lemon-juice has any such power as has been ascribed to it. A most excellent man, a friend of mine, Dr. Stevens, the gentleman who in the West Indies first tied the external iliac artery, has peculiar opinions respecting fever, and contends that the blood is in a diseased state in this disease ; and that after a time the proper remedy is, cer-

tain substances to alter the state of the blood ; minute doses of neutral salts. According to his account (and his statements are all to be depended upon), in the yellow fever, and other fevers, after the first attack is over, when the blood has fallen into this depraved condition, life is saved by administering minute doses of neutral salts, and remedying this defect in that fluid. I have seen them in his experiments render the blood very florid out of the body, and acids make it black. He contends that acids, therefore, must be injurious in scurvy, and citric acid among the rest, and advises nitre ; but I must say, that when we have so many evidences of the loss of ships' crews without the use of lemon-juice, and of their remaining healthy under the use- of the juice, I think more evidence must be brought forward than he gives to induce persons to agree with him. However, his work on fever will be well worth reading; I recommend it to your notice as soon as it is published, and you will judge for yourselves. In Mr. Herschell's works on the cultivation of the Physical Sciences, just published in Dr. Lardner's Encyclopædia, he mentions, among the great improvements that have been introduced for the good of society, the cessation of scurvy. He mentions this as one of the greatest blessings that have been accomplished for mankind in modern times. You will find him saying, that "at present scurvy is almost completely eradicated in the Navy, partly, no doubt, from increased and increasing attention to general cleanliness, comfort, and diet, but mainly from the constant use of a simple and palatable beverage, the acid of the lemon served out in daily rations. If," he adds, "the gratitude of mankind be allowed on all hands to be the just meed of the philosophic physician, to whose discernment in seizing, and perseverance in forcing it on public notice, we owe the great safeguard of infantile life, it ought not to be denied to those whose skill and discrimination have thus strengthened the sinews of our most powerful arm, and obliterated one of the darkest features in one of the most glorious of all professions."

In regard to the etymology of the word *scorbutus*, I believe it is *scharbock*, corrupted and latinised, and that *scharbock* itself comes from *scharf-pocke*, sharp or violent pock, or *schorf-pocke*, scab or scurf-pock; though scurvy is the medical English name for the disease *scorbutus*, and common people designate any cutaneous disease, with scurf or scabs, by the term *scurvy*. You may remember that when I desired the sister, of the ward to bring the man not with the leprosy but with the scurvy, she brought me the man with the lepra, assuring me that that was the man with the scurvy, and

had no idea of the sailor's disease being called scurvy.

Elliotson 1831

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