

does not take place as soon after exposure as the pustular.

3rd. The sore which follows inoculation with the matter of the primary pustular sore, or pustular bubo, is generally healed some weeks before constitutional symptoms appear. Thus, the primary sores which were followed, in two of the cases detailed, by constitutional symptoms, were healed before the constitutional symptoms commenced.

4th. The sore which follows inoculation with the matter of the secondary pustule, and of the exanthematic forms of syphilis, persist, in general, until constitutional symptoms appear. Thus, in all the experiments adduced, with these secretions, constitutional symptoms occurred before the local specific effects had subsided. Hence it is, that in practice, particularly among the lower classes, we very often find the primary and constitutional symptoms of exanthematic syphilis co-existing.

5th. Inoculation with the matter of the primary pustule, and of the ulcerated pustular bubo, seldom, if ever, fails to produce the characteristic primary pustule.

6th. Inoculation with the matter of the constitutional pustule, and of the exanthematic forms of syphilis, very often fails to produce any specific effect. I should here remark, that inoculations with this matter will succeed much more frequently if applied to a surface than if introduced by puncture. Hence it is that I have generally preferred the former mode of inoculation with this matter. It is well known that scabies is propagated by contact, and cannot be propagated by puncture; and that vaccina cannot be propagated by contact, although so easily propagated by puncture. Is not the fact which I have ascertained respecting the propagation of the syphilitic virus, analogous to those already known respecting scabies and vaccina?

7th. The primary pustule, whether produced by inoculation with the matter of a similar pustule, or of a pustular bubo, is not followed in the majority of cases by constitutional symptoms. Of the four cases which I have related this morning, only two were followed by constitutional symptoms.

8th. The primary exantheme, whether produced by the matter of the constitutional pustule, or by the matter of any of the exanthematic forms of syphilis, is, in a vast majority of cases, followed by constitutional symptoms. Thus, all the five cases which I have related in the last lecture on syphilis, and in this morning's lecture, were followed by constitutional symptoms.

ACCOUNT OF THE EPIDEMIC WHICH ATTACKED THE BRITISH AUXILIARY LEGION IN THE WINTER OF 1835-36, AT VITTORIA IN SPAIN.

By WILLIAM LARDNER, Esq., Surgeon to the
1st, or Reyna Isabel, Regt. of Lancers.

As no account (at least to my knowledge) of the epidemic which committed such havoc in the Auxiliary Legion, has yet been published, a few remarks, founded on sad and ample experience, may contain interest enough to find a place for them in the pages of THE LANCET. This disease was first noticed in the regimental hospital of the 1st lancers, in Santander. I do not attempt to investigate the cause, or causes, of it, nor did I ever see an instance of its being propagated by contagion. Suffice it to say, that, like cholera, it attacked all classes of persons; but more frequently those whose constitutions had suffered from bad living, or previous disease, fell victims to it. In the month of November, 1835, it extended its ravages to the Convent de Corban, distant about a mile and a half from Santander. Staff-surgeon Davies, who was appointed to take charge of that building, which was destined for recruits from England, appears to have considered the cause of the disease to have originated within the walls of the barrack. We find in his first report to head quarters the following:—"As to the origin of this disease, which has assumed, in a very short period after its attack, the marked character of typhus, it is involved in some obscurity, but I cannot help being impressed with the conviction that the generating causes may be fairly attributed to the dirty, crowded state of this convent for some weeks past, a want of proper attention to cleanliness and ventilation, and a succession of rainy weather for some days previous to its breaking out, in connection with a close state of the atmosphere.

The state of the atmosphere here alluded to was noticed by many at this period. It is a singular fact that the same state of the atmosphere was remarked in Portugal at the invasion of cholera. Even vegetation drooped beneath its withering influence. I saw, myself, whole groves of olives blasted. The faculty of Warsaw, when I was there, in 1831, were so puzzled about the cause of cholera, and struck with the appearance of the atmosphere, that they frequently analyzed it, and made several experiments with it, but failed in discovering anything. They might as well have analyzed the brain with a hope of finding the soul, or the thinking quality. The cause of cholera, typhus, and other serious epidemics, has baffled the in-

quiries of the most highly-gifted and industrious men in the profession. Like the human mind, these diseases must be studied by their effects.

In the latter end of November, 1835, the fever visited Vittoria, and there, indeed, were its deadliest ravages experienced. A more dreadful winter never was heard of; cold, rain, gloom, snow, plague, pestilence, and famine distinguished it. Add to these, the absence of *money*. The invasion of this malady being so sudden, and such a number of men had contracted it, that it became necessary to establish several extensive fever hospitals without delay. The means for doing this were exceedingly limited, and the naturally procrastinating character of the people of that place, was a stumbling-block to expedition. Thus a deal of misery existed, notwithstanding the indefatigable exertions of Mr. Callender, the Inspector-General, whose position was truly embarrassing. There were constant complaints, and constant requisitions, but little or no means of granting relief, or of redressing the grievances complained of. Another disagreeable circumstance was that of the decrease of his staff by fever, and subsequent mortality. At one period, in Vittoria, every staff-surgeon was confined to his bed with fever, excepting Surgeon Gannon, who was actively engaged, under Mr. Alcock, creating and organizing the hospitals. The activity and zeal of Deputy-Inspector Alcock (who brought with him the experience of the Portuguese campaign) deserves the highest encomiums. With the executive talent and enterprise of this officer, and the steady judgment of Mr. Callender, which a long British service had afforded him, wonders were worked in a very short period. Comparatively comfortable hospitals were established. The regimental hospitals were broken up, and the patients sent to general hospitals, and the regimental surgeons were appointed to the charge of them. The hospitals being now established, let us consider the disease that was to be treated within their walls.

The Vittoria fever had three distinctly marked stages, which were known by the following characteristics:—

The first stage commenced with an indescribable feeling, called by the people "all-overness," without much loss of appetite, and, as it advanced, pain in the head and loins; pulse not altered; perhaps it slightly intermitted; tongue clean, with a general oppression. At this period the patient was heard to express his suspicion of having caught the fever, and at the same time declare his intention of shaking it off. I had the fever on me for a fortnight before I left off the regular performance of duty in hospital. I cannot believe it possible to stop the career of this fever by medicines, even in the commencement of the first stage. I have

endeavoured to check it in many, and have seen measures adopted for that purpose, before the patients were anything more than frightened by a conviction of having caught it, and they were invariably worse than those with whom it ran its regular course. Emetics have been administered; some say with a good effect, but I never experienced it. Others have had recourse to the lancet, in the first stage, but I am prejudiced against its use. I, in general, opened the bowels with five or six grains of calomel, and two of tartarised antimony. I did little more in this stage than pay strict attention to the bowels. If diarrhoea existed, and it frequently commenced the fever, I used means of checking it, and here I found the mercurials essentially useful, combined with catechu and chalk.

The second stage is a restless, uneasy state, to such a degree as, in most instances, to amount to insanity, the patients endeavouring to commit suicide. I was obliged to have two attendants on all occasions with my patients, that they might never have an opportunity of injuring themselves. In many instances where this precaution was neglected, fatal consequences ensued. Two officers, in the second stage of the fever, succeeded in leaping from their windows, and were dashed to pieces. One of them, whose name was King, was a major in the third regiment. He was universally regretted. Although he had the best attendance, he found his opportunity to commit the suicide. In the second stage the tongue is dry, and of a reddish-brown colour; the eyeballs are swollen and sore; great debility and irritability are experienced; the skin is dry; the pulse quick, small, and hard; a greedy thirst is felt. Shaving the head, and applying cold affusion, either by pouring it on, or applying cloths, soaked in iced-water, on the head, was found of great benefit. A remarkable instance of the success of this treatment occurred in a captain of my regiment. He was a tall, powerful, plethoric young man, and was observed to be, in the second stage of the fever, exceedingly irritable; and in one of the morning visits paid by the assistant-surgeon, he proved it by jumping out of bed, and beating with all his might the said surgeon, who, by-the-bye, wore spectacles, which he smashed on his face. His rage did not end with this; he next attacked the apothecary, and pelted him with his bottles and healing materials, and kicked the orderlies out of the chamber. The senior medical officer was immediately sent for, and being accustomed to such freaks of his patient, he immediately ordered him, with a commanding air, to his bed, which he obeyed. He then ordered a large quantity of cold water to be poured on his head. The patient shuddered, and fell asleep. Cloths soaked in cold water, and

kept wet by an attendant, were constantly applied. He soon after fell into the third stage, when wine was administered, and he recovered. In the instance of this patient, the body was covered with an eruption, not of purple spots, but more resembling a nettle-rash; it differed from the latter in being of a bright-red colour. It gradually disappeared.

The third stage is that of stupor; when roused, exceedingly passionate, speaking incoherently; in fact, all the symptoms of partial pressure on the brain are then evident. The tongue, mouth, lips, and teeth, are covered with a brown tenacious fur; the patient seems to sleep, and is continually muttering. The pulse, in the beginning of this stage, is small and irritable. The medical attendant should visit his patient at this period of the disease, at least six or seven times a day, to catch the opportunity exactly when the system requires stimulants. I never waited very long, and, in some instances, I have given wine through the whole of the stage, with a decidedly good effect. If there was no diarrhoea, I did not attend to the bowels. I gave blue pill, grs. v., night and morning, combined with Dover's powder, grs. vii. If the system be not supported, fearless of inflammation at this period, there is no chance of saving the patient, and, in my opinion, the diffusible stimulants are useless, if not injurious. They are only fit to arouse, for a moment, the vitality of the system: they frequently nauseate, and too much faith is placed in their powers, and thus much time is lost with the patient. It appears to me to be very probable that this fever was produced by a malaria analagous to that which gave rise to cholera, or, in other words, a poison of the sedative class. An analysis of the symptoms and characteristics of the malady bears strongly in favour of this opinion. Any of the sedative poisons, if taken by degrees, or slowly imbibed, will produce effects closely analagous to the three stages of the fever above described. If a small quantity of opium be taken it produces an indescribable sensation of lassitude, and "all-overness." If a little more be taken, it produces restlessness; and, if persevered in, a state of stupor is the consequence. I conceived that the apoplectic symptoms, in the third stage, could be removed if the system was strengthened sufficiently to create a balance in the circulation. I accordingly tried the administration of brandy, to a degree that never perhaps before was attempted, and the success was beyond my most sanguine expectations. I had, in my regimental hospital, a great number of men who had lived badly, and perhaps had drunk hard for years. Those men were sinking in the third stage of fever. I gave to one man nearly *two bottles* of

brandy in twenty-four hours, and he recovered. I succeeded with the same treatment in several forlorn cases.

The first officer whom I was called to see, was a Mr. Scarth, of my own regiment. The two first stages passed by rapidly, without any dangerous symptoms, but clearly defined. The third stage alarmed me not a little. He fell, as it were, down an immense precipice of life. He had no voice, nor even the capability of turning his eyes towards me, and was dripping with perspiration, but his pulse was strong, full, and irritable. He also had a bad diarrhoea: I gave him small and frequent doses of catechu powder, and, considering his pulse to be one of debility and irritability, I ordered a wine glass of port wine every hour; I watched him closely at the same time, and found, after every glass of wine, that the fulness and irritability of the pulse was diminished; I then had a consultation held on his case, consisting of Assistant-inspector Williams, a Spanish surgeon of eminence, and the surgeon of His Majesty's frigate, *Castor*, and the whole objected to my treatment, but I was so convinced of the efficacy of it, that I continued it, and he rapidly recovered. The Hon. Major Greville was in close attendance with me, and he fully remarked the effect of the wine on the pulse.

A short time after this, I was ordered up to Vittoria, and placed in charge of the general surgical hospital. There I had ample opportunity of putting farther to the test my practice. A cadet of my regiment, of the name of Swift, was violently attacked. In the first stage, every symptom indicated the existence of inflammation; I accordingly bled him, and administered small and frequent doses of tartarized antimony. In the second stage he was so furious that I was obliged to have him held in his bed by two men. I ordered his head to be shaved, and cold water to be applied to it; and he soon advanced to the third, or comatose stage. In this state some recommended opening the temporal artery, the determination of blood to the head being so great; others recommended leeching the back of the neck; the latter I adopted, and regretted it afterwards, for he was evidently the worse for it. Being in a perpetual sleep, or coma, and the pulse being slow and small, I ordered him wine and brandy, as they could be purchased good, for every other article was bad and scarce in Vittoria at this period. He was taking nothing but brandy, wine, and quinine, for eight days, during which period he was in a state of coma, or sleep. He, also, recovered. I blamed myself for having bled him, and attributed the severity of the disease to the antiphlogistic treatment in the first stage.

The most remarkable instance of the success of this treatment was that of Staff-

surgeon Bennet. He was first attended by Mr. Alcock, the deputy inspector of hospitals, who, being obliged to march with head-quarters from Vittoria, left him in my charge. I found him in the last stage of the fever, with diarrhoea to an alarming extent. The prostration of strength was so great, that he could not speak, even in a whisper; no pulse was to be felt, and cold moisture oozed from the pores of his skin, similar to that of cholera. He scarce could raise his finger to make signs. I administered half drachm doses of powder of catechu every hour, and confined his drink to brandy and water, and occasionally rice water. I had the gratification of finding the diarrhoea checked in four-and-twenty hours, although chalk, and opium, and other astringents had been tried in vain for three or four days previous. He was five days under the treatment of brandy diluted with water, when he felt an inclination to eat, but still so weak that he could only speak in a whisper. I ordered biscuit to be grated into each drink that he took, and, finally, he was fed with light nourishing food, diminishing gradually the brandy. He, also, recovered. I gave him thirty-two ounces of brandy every four-and-twenty hours, for five days, and before he was attacked with fever he could not bear the idea even of brandy, he was so scrupulously abstemious. I have tried it with every description of person, in the third stage of the fever, and it invariably succeeded. *I never lost a patient with the disease in private practice.*

Having said so much of the Vittoria fever, I now come to its melancholy consequences. The dreadful sufferings of the poor fellows who had the misfortune to contract the fever, without having the necessary comforts to bring them through, it is impossible to describe. I had sixty patients at one time in the surgical hospital, who had recovered from the fever, whose toes, feet, or legs were literally in a state of putridity. It was a most melancholy reflection to think of such a number of men, with their bodies recovered from a deadly plague, and certain death staring them in the face from gangrene of their extremities. Those men who were young, and whose constitutions were good, were prevailed upon to allow their legs to be amputated. Some did well, while with others the stump was attacked with gangrene, and others died from diarrhoea, which is very common with a weak constitution after amputation. Surgeon Johnson, of the 4th regiment, and myself, performed a great number of the amputations in the surgical hospital during the period I had charge of it: they were all of the leg. He always amputated with the flap; I with a circular incision: the success was about equal with both. On one patient he performed the flap operation on the right leg, and I per-

formed the circular on the left, and, strange to say, both those stumps healed, by the first intention, in about an equal space of time. The patient was a healthy young man, and declared that he never had a day's sickness before he marched to Vittoria. I prefer the circular, from many reasons; and I recommend every young surgeon, who would not like to run the risk of committing a blunder in so serious a matter, to follow my advice, from the following reasons:—Any surgeon (no matter how green he is) is metaphysically certain of having enough of covering for his stump in the circular operation, as it is a *laid down rule* that he can scarcely have too much. But in the flap operation, having too much is a serious evil, and having too little is still more so. Yet how many instances are there of experienced surgeons having too much and too little. It is unpleasant to be obliged to remove a portion of the flap if it be too large; and if it be too small, it is both difficult and unpleasant to enlarge it. Neither cases speak well for the operator; and we do not find that the patient, in after life, is the better from the stump being covered by the muscles of the calf. It is stated that the flap operations guard against the evils of subsequent absorption; but, in my humble opinion, there is too much of theory in this objection.

The hospital in Santander was opened on the 5th of November, and there were admitted, up to the 1st of July, 820 patients. The mortality during this period was 112. The most of these were fever cases. The mortality in Vittoria was under 1,000, and we had an average of 3,000 in hospital. In the account which I published of the cholera in Portugal, I stated that the average mortality of the different places which the disease visited, was a fifteenth of the population. It may be seen that in Spain, by the late epidemic, we lost at least a seventh of the Legion. Since I wrote the above account, I have been informed, by Mr. Alcock, that a number of the men, whose limbs were amputated in Vittoria, have arrived in Santander, and enjoy perfect health, as also do a number of those whose feet were partially amputated, according to the methods recommended by Key, of Leeds, and by Chospart.

On Thursay, the 13th instant, Dr. Barne was elected Physician to the *Magdalen Hospital*, in place of Dr. Cholmeley, deceased.

The medical booksellers are preparing for publication a volume, entitled "Ophthalmic Memoranda respecting the Symptoms and Treatment of those Diseases of the Eye which are most commonly met with in practice," put together by Mr. J. Foote,