

As to the virtue of quinine as a prophylactic, I can, from watching its influence on our small party, give only negative conclusions.

1. It cannot be depended upon, in any dose, to avert an attack; though it would seem that, if given in a large dose on the first approach of symptoms, it will lessen the severity of the paroxysm. We have given every morning for a year past a dose of three grains with a little wine or rum; the rum because early morning is a very cold time during the greater part of the year, and cold and misty during May, June, and July, and the men seem to require a stimulus at this more than any other time. But, though this practice has been religiously persevered in, fever has not been warded off; in fact, it has been less frequent with some of those who have been longest in the country, and who refused to take the quinine regularly, than with the later arrivals, who have never missed taking the morning dose.

2. In addition to the morning dose, large additional ones have been given to men who have been frequently attacked, when they have felt indications of an approaching attack—ten, twenty, or thirty grains at a dose; but the paroxysm, though mitigated (as compared with that when no quinine has been given) in severity, has never been warded off.

3. Some of the expeditionary party have almost entirely abstained from taking quinine for a year or so past. These men have not been more liable to fever; and, when attacked, have not suffered from any more severe form than the rest. These men, however, have never refused quinine during fever, knowing that they cannot hope for safety until they shall have been cinchonised.

4. During the two months when the boats of H.M.S. *Gorgon* were up the river (which must be considered an unhealthy period, as the rains had ceased earlier than usual, and marshes were drying up), there were 12 men left at the mouth of the river, who took no quinine nor fever; whilst of the 54 men who went up in the boats, and who were regularly taking it with a double ration of spirits, 6 only had escaped fever on their return to the sea, and of these six men one alone had escaped a month later. Of the complement carried by the *Pioneer* (22) but two escaped. Those, however, who were left at the mouth of the river had the advantage of sea-breeze (which set in for the greater part of the day) during the whole time the rest were absent. Of 39 *Gorgon* men, who went seventy-four miles up the river and returned after thirty-two days, 34 had fever. Of 15, who were sixty-one days up river 14 suffered. These men, for the greater part of the time, had ordinary ship's rations, with extra rum, given with a daily dose of quinine. It was observed that those men who were young and active were more immune than the older, more feeble, or indolent.

5. It might be thought that three grains for an habitual dose were too small to test the efficacy of the remedy, and that no satisfactory result could be obtained from it. But very large doses have been given, as before said, with no more satisfactory result; in fact, we have had to invalid one man who had constantly taken these large doses, and from whom the fever was never averted.

There are circumstances that modify fever. Though in the rainy season there is less of the disease than at other times, the form is more severe, because an attack is always brought on by the patient becoming thoroughly wet, or from having slept in damp or wet clothes.

The excessive irritation from mosquito bites will keep up fever, in spite of all treatment. The loss of rest occasioned will unfit one for the day's duties; appetite is lost; and headache sets in. A harsh diet of coarse native grain and foods will often throw the system into disorder, producing headache, dyspepsia, etc., and probably predisposing the body for the reception of malarious poison.

The consideration of these points may indicate the

best means for prevention. Care should be taken to insure a dry sleeping-place, and warm dry clothing for night use. A good mosquito curtain should be provided. Each person should on rising take some strong hot coffee. It is essential that a generous mixed diet be had so long as river work continues. The time of year best suited for river exploring or other work is the rainy season; but this only holds good so long as there is thorough protection from the rain. But for open boat work it would be very unadvisable to try this time of year, and much better to take the dry cold months of May, June, and July; for though one travelling in these months would be more subject to diarrhoea and congestive disorders, from the changes of temperature between night and morning, fever attacks would be comparatively mild.

There can be no doubt of the malariousness of these rivers, and that immunity from the diseases specified cannot be guaranteed, however sedulously precautions and sanitary measures be carried out; but from the large number of cases occurring amongst the men who have been resident long enough to test the climate, and be tested, and the small percentage of deaths—one only having occurred in the *Pioneer* during the last twelve months—there can be no doubt that the fever *per se* is of a mild disposition, perfectly amenable to treatment when taken early, and dangerous only when left to take its own course.

FOREIGN OPINIONS OF THE NATURE OF SYPHILIS.

Collected by M. BERKELEY HILL, F.R.C.S., M.B.Lond.

II.—VON BAERENSPRUNG OF BERLIN.

PROFESSOR VON BAERENSPRUNG, of the Charité Krankenhaus, Berlin, agrees mainly with Ricord and others of the French writers on syphilis in his doctrines on chancre.*

He commences with two propositions, which express the result of an examination of the statistical records of his wards.

The first is: A chancre which heals without indurating is never followed by syphilis. The second: An indurated chancre is invariably followed by constitutional syphilis. These two observations, he remarks, are accepted pretty generally by all parties; but it now remains to prove that these two chancres are originated by independent causes. He announces himself firmly convinced of this fact. The most important proof of the distinct nature of the two sores, in his opinion, is that simple treatment is sufficient for the cure of the soft chancre, but that the consequences of the hard one require a special antisyphilitic course for their cure.

Chief Distinctions in the Form and Results of the Two Sores. In most respects the professor follows closely the order and description of Ricord. The characters of the sores, for the better comparison, may be arranged in parallel columns.

Simple Chancre.

1. The contagious principle is contained in the serpus of the sore, and in that of the suppurating bubo, which often accompanies it.

Infecting Chancre.

1. The syphilitic poison is contained in the secretion of the indurated chancres, mucous tubercles, and probably other secondary syphilitic results.

* In drawing up this *resumé* of Bärensprung's opinions, I have made use of the condensation of his views contained in Friedrich's *Lehre vom Schanker*, a small pamphlet containing most of the recent opinions of syphilitic writers in Germany, France, and England, and published at Erlangen, 1861.

Br Med J: first published as 10.1136/bmj.2.95.440 on 25 October 1862. Downloaded from http://www.bmj.com/ on 5 December 2020 by guest. Protected by copyright.

2. Transmitted by accidental or artificial inoculation, this pus in twenty-four hours causes the formation of a pustule, which quickly becomes an ulcer.

3. This ulcer is roundish, sharply cut; the borders are wormeaten; the floor furnishes plentiful greyish pus. Its base remains nearly always of the consistence of the surrounding tissue.

4. This chancre is a simply local affection involving no constitutional disease. Its operations do not extend beyond the nearest group of lymphatic glands, which may inflame and suppurate from the irritation of the chancrous pus. The pus of the bubo is inoculable. The great characteristic of this sore is its irritability. Hence arise sloughing, serpiginous ulceration, etc.

5. Syphilitic and non-syphilitic persons alike are susceptible of this contagion as often as it is applied; consequently these sores can be inoculated on their bearer.

Sloughing of chancres usually destroys the contagious principle of soft chancres, but has no effect in preventing the constitutional effects of infecting chancres.

The varieties of simple chancres depend not on the state of the source of the poison, but on accidental peculiarities of the individuals attacked. Exhausted states of the constitution are among the disposing causes of sloughing.

Soft chancres, if repeatedly irritated by caustics, etc., may become so dense as to be undistinguishable from indurated chancres, and their non-syphilitic nature must be determined by the absence of indolent enlargement of the lymphatic glands, etc.

In hard chancres the induration commences before ulceration; it is a consequence of the constitutional infection.

Syphilis resembles small-pox and some other contagious diseases by giving to the same individual immunity from second attacks.

Induration-matter is not an inflammatory product, but a new formation, set in action by the irritation of a specific poison. This new product is little capable of organisation, but soon undergoes granular degeneration. Thus it breaks down, and an ulcer is formed out of the newly formed tissue.

All cases of syphilis except hereditary syphilis commence with a chancre.

Causes of Confusion of the Two Sores. There are, he observes, two circumstances which have caused confusion between the simple and the infecting sores. The first is, that the diagnostic marks often fail in distinct-

2. Similarly transmitted, this poison shews no immediately visible effects; after four weeks of incubation, a papule is produced at the seat of incubation, which ulcerates and forms an indurated chancre.

3. This papule increases in size and hardness, being lifted above the surface of the surrounding skin; its margins are no higher than the base, which is excoriated, and furnishes a little sanious pus.

4. The so-called indurated chancre is at no period of its existence a local affection, but from its very commencement a product of the action of the poison on the blood. It is little irritable in its nature, so that sloughing is rare, and suppuration of the lymphatic glands equally so; and the pus is not inoculable. The indolent enlargement of the lymphatic glands is not confined to one group, but spreads to more distant chains, and occurs, not accidentally, but certainly, at a short period after the formation of the chancre.

5. Persons having once been inoculated with the syphilitic virus are free from further infection; consequently this sore cannot be inoculated on its bearer.

ness. Induration is often absent in women, and now and then in men. Soft chancres may become dense through continued irritation; while the state of the glands has not been carefully watched until of late years. The second is, the two chancres are often present together on the same spot, or not far apart; and the symptoms are then a mixture of the two orders.

To show how confusion may arise, he gives the following hypothesis, which formularises what he has seen in his practice.

A. has a mistress, B. She is syphilitic, and is the subject of mucous tubercles, but does not infect A., who has had syphilis. B. admits other lovers; of whom C., who is virgin from syphilis, is infected by her, and has an indurated chancre. D., another lover, has soft chancres, with which he inoculates B.; who in her turn inoculates A. Thus B. is the source of both contagions; and B. has inoculated the secretions of different chancres and syphilitic affections on various persons.

Result of Experiments. Series A. Inoculation of the bearer with the secretion of soft chancres.

1. Sloughing chancre in three individuals; negative results in all. No syphilis.

2. Multiple simple chancres in fifteen individuals; all positive results. No syphilis.

3. Ulcerating buboes in five individuals; positive results. No syphilis.

Series B. Inoculation with syphilitic secretion on syphilitic individuals.

1. Indurated chancre of the lip in four individuals; negative results.

2. Indurated chancre of the genitals in nine individuals; negative results.

3. Indolent bubo in three individuals; negative results.

4. Various syphilitic affections, condylomata, ecthyma, etc., in fifteen individuals; all negative results.

Series C. Inoculation of syphilitic secretion on persons in whom no syphilitic symptom was perceptible at the time of inoculation.

1. *Inoculation of Four Persons apparently free from Syphilis, but who had previously suffered from it.* Caroline L., in May 1857, was under treatment in the hospital for eruptions, condylomata, sore throat, and enlarged glands, and was discharged, cured without mercury, September 1857.

On Nov. 10th, 1859, the patient was readmitted, with recent gonorrhœa, having remained free from syphilis since her discharge two years previously. On the day of admission, she was inoculated on the thigh with the pus of an indurated chancre in four places. The result was negative.

In 1860 she came again under observation; but was, and had been, quite free from syphilis of any description.

Sophie A., constitutionally syphilitic from Nov. 1858 to July 1859, was discharged cured. Nov. 1859, she was readmitted with a soft chancre, and was inoculated from a hard chancre on the thigh. Negative result.

In January 1860, she again came under observation, and had remained free from syphilis.

The following two cases are exactly similar, except that one was inoculated from a condyloma instead of from an indurated chancre.

2. *Inoculation on Two Individuals, virgin from Syphilis: Opportunity of noting the Incubation Period.* Marie G., aged 23, had been repeatedly under treatment in the hospital for gonorrhœa and warts, but never for syphilis.

Being, on May 26th, 1859, admitted for a blennorrhœa of the vagina, she was most carefully examined, but no trace of syphilis could be discovered.

On May 28th, three inoculations were performed on the right thigh with the pus of an indurated chancre. The next day no reaction shewed itself at the seat of inoculation, which by the 6th June was no longer visible. Her treatment during this time consisted of an astringent injection.

On June 25th, the points of inoculation were again perceptible. Next three small "knots" or papules arose, which, on July 1st, were covered by a scab. Underneath the scab a minute ulcer could be detected. At this date the lymphatic glands were not yet swollen. From thence to July 5th, two papules grew rapidly, the third withered. By this date the glands were indolently swollen. The two papules had both attained the size of a sixpence. On July 12th, they had coalesced into one ulcer with a raised and very hard base, ulcerated on its surface, and presenting a characteristic indurated chancre. The lymphatic glands were swollen, very hard, and slightly tender.

By July 20th, the chancre was as large as a florin, and of gristly hardness. Its border was on a level with the floor of the ulcer, but secreted no pus, being covered by a diphtheritic membrane.

Healing commenced Aug. 21st, and by the 29th was completed without treatment. A hard cicatrix remained. By this time a roseolous eruption had appeared on the skin, and some mucous tubercles on the labia majora. Then a non-mercurial course of treatment was employed, and the patient was discharged cured on the 1st October, the cicatrix and lymphatic glands being still hard.

Bertha B., aged 18, had suffered several times from gonorrhœa, etc., but never from syphilis. On May 18th, 1859, she was admitted with vaginal discharge, but no sign of syphilis present. On May 20th, she was inoculated on the right thigh with the pus of broad condylomata. The irritation of the puncture quickly disappeared, and remained imperceptible until June 17th, when three hard red papules began to form themselves on the site of the inoculation. On the 21st June, these three papules were ulcerated, but covered by a scab. They increased slowly, until they united and formed an ulcer larger than half-a-crown, with a gristly, well defined base; and in other respects the sores were similar to that of the preceding case. By the 25th June, the lymphatic glands were plainly swollen and hard. In other respects this case resembled the preceding ones.

These two interesting cases very well illustrate the incubation period (twenty-eight days in one, and twenty-nine days in the other case) and course of the subsequent primary and secondary symptoms. The induration commenced in the glands ten days after the chancre began to form in one case, and eight in the other. The ulcers did not heal in the first case till it had run a course of sixty-four days; and about an equal period elapsed before the secondary symptoms were well marked.

In both these cases the indurated chancre had little resemblance to a soft chancre, with its sharply cut margins, and wormeaten floor, saturated with greyish pus.

This author, by the similarity of his views to those of Ricord, brought strong support to the Dualist party.

The incubation period of the hard chancre is strongly insisted on by most syphilitic writers; Ricord being the chief denier of its existence at present left unconverted.

[To be continued.]

WEIGHTS AND MEASURES. France was the first country to adopt an uniform system. Louis the Sixteenth, at the recommendation of the Constituent Assembly, invited, by a decree, all the nations of Europe, and particularly the King of Great Britain to confer respecting the adoption of an international system of weights and measures. No response being given to this invitation, France committed the consideration of the subject to some of the most learned men of the age, who devised what is called the metric system; the most simple, convenient and scientific system of weights and measures in existence. In this country a standard of uniformity existed before the Conquest. It was enacted in the time of Richard the First, and declared by Magna Charta, that there should be one weight and one measure throughout the realm.

Transactions of Branches.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

COMPOUND DISLOCATION OF ANKLE-JOINT: IMPROVED TREATMENT.

By EDWARD GARRAWAY, Esq., Faversham.

[Read September 11th, 1862.]

I AM aware it is quite unnecessary to remind you that there are three methods of treating compound dislocation of the ankle-joint; but I am under the necessity of saying a word or two upon them, preliminary to introducing the little girl who is the subject of my remarks.

The first method is simple reduction, not always practicable; but desirable, when it can be accomplished without undue violence. The result is generally ulceration of the articular cartilages, accompanied with a vast amount of irritative fever and constitutional disturbance, occasionally, though rarely, necessitating secondary amputation; and a protracted convalescence, terminating in an immovable fixed joint.

The second plan is the cutting off of the cartilaginous extremity of the tibia and fibula so as to facilitate reduction. The ends of the bones, thus shortened, coming of course into less forcible apposition with the cartilage of the astragalus, there is less of ulceration, less of irritative fever; and these cases commonly do well, recovering, as in the former mode of treatment, with a more or less stiff joint.

The third method is amputation of the leg, a proceeding, I suppose, in these days, rarely resorted to; notwithstanding that a writer in a recent number of the *Edinburgh Medical Journal*, summing up his cases treated in the wards of the Royal Infirmary, says, in reference to a particular case of compound dislocation of the ankle joint, which terminated unfavourably: "The accident having proved fatal in this case to a young man of apparently sound constitution, makes it still more evident that primary amputation is the safest operation for compound dislocations in this situation." This opinion, however, I think, we should be slow to endorse for, unless extensive laceration of arteries and soft structures, fracture and comminution of bones, or some other formidable complication, be added to the dislocation, we should hardly be persuaded to inflict upon a patient so irreparable a loss as the deprivation of a leg.

You will observe that the object surgeons have ever had in view in saving the limb, has been to form an anchylosis between the bones of the leg and the astragalus—a good stiff joint; any better alternative being scarcely deemed possible. In the little maiden I am about to introduce, you will perceive an ankle-joint perfect in its conformation, with no less freedom of motion than its fellow; and here are the ends of the tibia and fibula belonging to it on the table.

How this happy consummation was brought about is told in few words. The patient, ten years old, was getting over an iron railing, when she fell, and hung suspended by the left leg. After she had been extricated and taken home, I saw her in bed. The bones of the leg were protruding to the extent of about two inches on its external aspect; the foot was turned up at right angles, the sole being presented to the opposite leg; the skin on the dorsum of the foot was tucked under the protruding tibia. Some efforts were made at reduction, but it was soon perceived that this could not be accomplished without recourse to a great and unjustifiable degree of force. In consultation with my partner, Mr Giraud, it was determined to remove the ends of the protruding bones; not so small a slice as just to admit of reduction; but a sufficiently large portion of them