

body will show this distortion must necessarily follow these operations of Lisfranc and Chopart, independent of any muscular action which may be brought into play.

Thus the foot is constructed in the form of an arch, the summit of which is at the astragalus. The two pillars of this arch differ very much from one another. The posterior one is about half the length of the anterior. It consequently descends far more abruptly. It also consists of but a single bone, the os calcis, whereas the anterior pillar not only includes the metatarsal, but also the cuboid, the three cuneiform, scaphoid, and the head and neck of the astragalus, "so that when the foot rests flat upon the ground the chief part of the weight is transmitted from the tibia forwards."<sup>1</sup>

Now lop off a portion of this anterior pillar, and that which is left must of necessity become so much depressed that it will touch the ground in standing, for it is through it that "the chief part of the weight is transmitted." This will throw the weight still more forward, and less of it will be transmitted through the os calcis. Indeed, the more perfectly a foot is arched, that is, the more vertical its os calcis is placed, the worse must be the distortion after one of these operations; for the plantar face of the os calcis and the lower edge of the scaphoid facet of the astragalus must, in the Chopart operation, be driven on the ground when any weight is thrown on the limb, and a similar depression, though in a less degree, must occur in the Lisfranc.

A complete and permanent severing of the tendo Achillis cannot have any effect in preventing such a consequence, no matter what influence the muscles attached to that tendon might exert in increasing the evil.

To all this it may be answered that cases of successful prevention of the elevation of the heel after these operations by a division of the tendo Achillis have been reported, by such men as Velpeau, Robert, and others. This we cannot deny; but others equally reliable have reported tenotomy an absolute failure in these cases; and how are we to reconcile the discrepancy between such authorities?

We had thought ourselves successful in preventing the difficulty after the Lisfranc operation by means of the weight, as we have used it after the Pirogoff; for when we discharged the cases (four in number) from our care, they did not evince much if any disposition to it, but when we came to examine these cases a year or more afterwards we discovered the deformity as complete as when no expedient is resorted to. A temporary success was, with us, as it has been, probably, with others, mistaken for a permanent result. Indeed, it would seem impossible for any expedient looking to a prevention of the contraction of the muscles of the calf as the source of the difficulties to succeed; and it is equally impossible to restore the proper elevation of the os calcis in front after either of these operations. Hence we think our preference for the Pirogoff well founded.

*Spotted Fever.* Dr. JEWELL reported a case.

The following case of the epidemic disease which has prevailed in some sections of our city for upwards of a year, visiting several of the adjoining neighbourhoods, and making its appearance in other districts of our country under the popular, but perhaps erroneous title of "spotted fever," may prove of some interest to the pathologist, especially through the revelations

<sup>1</sup> Humphry, *op. cit.*, p. 494.

of the *post-mortem*, in the event of its not affording a clear illustration of the true character of this formidable disease.

Leonard S., aged nine years, residing on 4th above Race St., in this city, was in the enjoyment of perfect health until Thursday evening, the 11th of February, ult., when he complained of uneasiness and stiffness in his lower jaw and muscles of the throat. No particular notice was taken of it, and he retired to bed as usual. During the night his mother said he was restless, and continually throwing off the bed-clothes. In the morning he declined getting up, telling his mother he could not go to school, as he was sick. She noticed that his speech was thick, mumbling his words, as if his tongue or throat were swollen, and fearing he was not well, encouraged him to remain in bed.

Late in the morning, however, he made his appearance in the sitting room, kept close to the stove, complained of being cold, and in a short time had a severe chill, his skin assuming quite a purplish hue. He was covered up on the settee, some warm tea was given him, and as the intensity of the chill subsided, his mother gave him two purgative pills.

In the afternoon he became very sick at the stomach, and commenced vomiting; his skin, however, retaining its bluish or collapsed appearance. Continuing to grow worse, retaining nothing on his stomach, and complaining of violent pain across the forehead, with extreme restlessness and apparent suffering, Dr. Housekeeper, of Kensington, was sent for, who saw him at 10 o'clock in the evening of Friday. The doctor informed me that he observed nothing in his symptoms warranting alarm, and prescribed a neutral mixture for his gastric irritation, with mustard on the surface of the stomach, and also to the back of the neck and ankles, for his pain in the head.

During the night his mother said he continued to be restless, vomited frequently, would cry out with the pain in his head, and when touched or moved, would complain of extreme muscular soreness.

On Saturday morning the Dr. found him in convulsions, and his body covered with what he called a purpura eruption.

I saw this patient by request of Dr. H. about 2 P. M. Saturday; found him unconscious, lying on his left side, knees drawn up, muscles of the back of the neck retracted, and head thrown backwards, permanently. His eye-balls flamed, with dilated pupils, and fixed steadily in one direction, the lids being wide open, and the pupils insensible to light. The skin was below a natural temperature, lips and hands congested and of a dark purplish colour, pulse slow, but scarcely perceptible. Scattered over his face, body, and extremities, were to be seen numerous spots resembling petechiæ, of a dull red colour, varying in size from a pin's head to that of a half dime, not elevated nor affected by pressure. The boy appeared restless, in constant motion, with considerable jactitation of muscles, and making frequent spasmodic efforts to vomit. I ordered dry cups to the nucha and spine, mustard to the lower extremities, and a stimulating turpentine enema. His condition forbade the administration of further treatment, as the case appeared to be hopeless. He passed into another severe and protracted spasm after I left, and died at 5 P. M., after an illness of 48 hours.

By permission, an autopsy was made by Dr. Packard, on the next afternoon, 24 hours following the death, in the presence of Drs. Housekeeper, Mayburry, and Mr. Ewing, student of medicine, and myself. I am indebted to the Dr. for the accompanying notes of the appearance of the different structures, as presented by the examination.

Body not very rigid. Skin very white; hair red. A few scattered

petechiæ were observed over the chest, arms, belly, and legs; none on the face. A good deal of hypostatic congestion of the posterior or under portions of the body, of the scalp over the occiput, and of the ears, was noticed.

On cutting through the scalp, the blood flowed away more freely than usual, and it was found that it was abnormally fluid within the veins.

The vessels of the dura mater were markedly congested with fluid blood, very dark in colour. A yellow effusion existed in the subarachnoid space; it proved to be of a serous character, and to exist in the spinal canal also.

The substance of the brain was firm, with very little if any congestion. In the lateral ventricles there was a somewhat abundant reddish serum, and on cutting into the brain substance anywhere, the gap would soon fill up with serum exuding from the cut surfaces.

*Thorax.*—The lungs were entirely healthy, except that the middle lobe of that on the right side was fastened to the chest-wall by old pleuritic adhesions.

About 3ij of serum were observed in the pericardium. The heart was firmly contracted, and contained some small, very black, softish, currant jelly-like clots. One of these, in the left ventricle, was in part firm and pale. The blood in the cardiac veins was fluid, and could be readily pressed along the vessels, returning immediately upon the pressure ceasing.

*Abdomen.*—Liver healthy. Gall-bladder distended with bile. Spleen healthy. Pancreas also.

The blood in the mesenteric veins presented the same fluidity as did that in the thorax and cranium.

Mesenteric glands enlarged, and many of them congested.

Some purpurous spots existed here and there on the mesentery.

The mucous membrane of the stomach was very deeply congested at the central part of the organ, and especially towards the lesser curvature; the congestion fading towards the cardiac and pyloric extremities.

Peyer's patches were normal.

The kidneys were deeply congested. A portion of the left kidney, in which the congestion was deeper than it was in the right, was sent to Dr. Fricke for examination.

One of the purpurous spots on the surface of the abdomen was cut through, and found to be caused by a deposit or ecchymosis in the substance of the true skin, and not upon a mere effusion beneath the cuticle.

Dr. Fricke examined the kidney minutely, and in a note, writes:—

“The minute anatomical structures are all normal, and although the colour was such as to induce the belief that the organ might have been highly congested, I need not remind you that the deep colouring of the kidney in *post-mortems* is in no wise a trustworthy symptom as to the healthy or unhealthy state of the organ.”

From the character of this case, and the results as disclosed by the autopsy, together with what I have observed in several similar cases coming under my notice, and from all the information I have gathered through other sources, I am inclined to the opinion that the disease still prevailing in our city, and designated by many as “spotted fever,” is not altogether new or unknown either in Europe or in this country. That it has not only been noticed by several writers on the practice of medicine, but has been described by them under the name of cerebro-spinal meningitis, and has, within a few years past, prevailed at different periods, both in Europe and in this country, in the character of a formidable epidemic. According to a statement made by Dr. Bell, in his work on the *Theory and Practice of Medicine*, an analogous disease had prevailed at different times in

Europe between 1510 and 1805. This same author furnishes complete references to its appearance in different cities and towns in France between 1837 and 1842. Of its having been noticed in Italy in the winters of 1839, '40, and '41, and in Gibraltar in 1844. Dr. Bell also quotes, Dec. 1842, from a paper on the same disease by Dr. Richardson, in the *Western Med. and Surgical Journal*.

Dr. Wood, in his *Practice*, describes it as occurring epidemically, and refers to *Ranking's Abstract* for the account of its having prevailed in Ireland in 1847, as described by Drs. Darby and Mayne, in the *Dublin Journal*.<sup>1</sup>

In this country the disease made its appearance at the commencement of the present century, when it occurred at first in Massachusetts, and is described by Dr. Gallup, of Vermont, and North, of Massachusetts, as "spotted fever." In the 1st vol. of *Chapman's Medical Journal*, p. 167, will be found a review of a pamphlet by Dr. E. Hale, Jr., of Boston, of spotted fever, as it prevailed at Gardiner, Maine, in the spring of 1814; and although it has been doubted recently whether the epidemic, as described by him, was the disease now existing in this city, I believe it to have been essentially the same, although it is true, its visitation at that early period exhibited symptoms which are not prominent in the present epidemic.

The reviewer of the above paper refers to the fact of "spotted fever" having appeared in 1806, in different parts of New Hampshire and Massachusetts, as described by Gallup and others, and after lingering a short time in that part of the country, gradually spread itself over the whole of New England, entered into New York and the Canadas, from thence pursuing a direct track through the interior of Pennsylvania, invaded Ohio and Kentucky, extended to northwestern Virginia, and finally to the southern extremity of the United States. He also traces its appearance in Philadelphia in 1813, where he says for a short period it assumed a malignant form, and the victims of its ravages were numerous, after having committed its frightful ravages upon the inhabitants of the circumjacent country.

In the *N. O. Med. and Surgical Journ.*, vol. v., p. 295, will be found an interesting history of the disease as it appeared in Montgomery, Ala., in the winter and spring of 1848, under the title of epidemic meningitis.

In vol. 4th of the same journal, will be found papers by Dr. Hicks, of Vicksburg, and Dr. Taylor, of Whiteville, Tennessee, as the disease prevailed to some extent in those places.

The report of the Medical Society of Pennsylvania, for 1863, contains an account of the epidemic as it prevailed in Montgomery Co., in the winter and spring of '63.

Within a few days, I have had access to a carefully drawn up history of "spotted fever," or more properly "epidemic meningitis," by a Fellow of the College, giving an account of the disease as it has prevailed, especially in the United States, tracing its visitations as far back as the commencement of the present century, and following its appearance down to the present time. The writer of this interesting history has no hesitation in identifying the present epidemic with the spotted fever as it has prevailed

<sup>1</sup> An account of the disease is also presented by Dr. Thacher, in his *American Practice of Medicine*, as it prevailed sixty years ago in the New England States. This account is based upon a report made to the Mass. Med. Society by a committee consisting of Drs. Thomas Welsh, Jas. Jackson, and John C. Warren.

Dr. Condie, in the 5th edition of his work on *Diseases of Children*, gives a very elaborate account of the disease.

"at different periods, in several portions of Europe and of the United States; exhibiting, it is true, in some of its visitations, certain symptoms which were absent in others, and hence receiving from the writers, to whom we are indebted for a history of its several occurrences, different names according to the predominance of some one symptom or set of symptoms." He is convinced that they are essentially the same, wearing the same livery, and characterized by similar "features, viz., suddenness of attack, intense headache and spinal pain, followed by stupor or coma, and in the greater number of cases, by a peculiar eruption upon the surface, having a very close resemblance to the ecchymoses of scurvy."

The author of the history to which I refer gives an outline of Dr. Thacher's description of the disease, which in all respects corresponds with that which is now prevailing in our vicinity.

He also presents an account of the disease as given by Dr. Edward Page, of Hallowell, Maine, as it was observed by him between 1810 and 1816. This writer, he says, makes four divisions or varieties of "spotted fever," namely: 1st, the tetanic or cerebro-spinal; 2d, the catarrhal or pneumonic; 3d, the gastro-enteric; 4th, the algid.

There may be those familiar with the several forms of the disease, as seen at this time, who will be in possession of sufficient evidence to corroborate the truthfulness of the divisions, as suggested by Dr. Page. We are not, however, prepared to adopt his theory. His first and second divisions include the symptoms to be found with very little variation among the cases I have witnessed.

The disease prevailed extensively in Central and Western New York in 1857, as will be seen in the *Transactions of the Medical Society of the State of New York*, in three several papers by Dr. Thomas, of Utica, Dr. Kendall, Clay, Onondaga Co., and Dr. Squire, of Elmira.

*Case of Cerebro-Spinal Meningitis, sometimes called "Spotted Fever."*

—Dr. STILLÉ related the following case:—

A young gentleman, 19 years of age, of uniformly good health and of a sound constitution, resided in one of the most salubrious districts of this city. He was occupied every day in a wholesale dry-goods store in Chestnut Street, between Second and Third Streets, and is not known to have been in any neighbourhood or house in which the disease he was attacked with existed. An elder brother had been ill with typhoid fever from the first week in January, and, during that month, had often been attended by night, and, occasionally, during a portion of the day, by the subject of this notice. But from the first week in February, this attention had become unnecessary, and there is no reason to suppose that the health of the younger brother had been impaired by it.

On Friday, February 26th, he appeared perfectly well, and sat with the other members of the family, engaged in cheerful conversation until after eleven o'clock at night. He had taken his meals with his usual appetite, and of all the social circle there was certainly not one who had the appearance of more perfect health.

At 3 o'clock A. M., on Saturday, he waked in a violent chill, accompanied with a sense of extreme prostration, frontal pain, which grew more and more intense, and aching pains in the back and limbs. He did not vomit, nor had he any stool. He was very restless, and breathed hurriedly. I first visited him at 9 o'clock. His face was pale and his features sunken; the lids nearly covered the eyes; the conjunctivæ were strongly injected;