

resorted to, and maintained for ten minutes, when the natural function and consciousness were completely restored—but the delirium as high as ever (contrary to previous experience). Continued support and opium.

27th, 9 A. M. Patient has not slept, but has taken some food; her delirium is more quiet and pleasant. Continued punch and opium. 9 A. M. Fiercely delirious again; obliged to tie her down to her bed, where she struggled and fought all night. Punch and opium continued. Did not think best to repeat inhalation of chloroform.

28th. Has beaten herself out. Conscious; rational; dying; dead (5½ A. M.).

Post-mortem examination made.—*Viscera:* thoracic and abdominal, healthy. *Brain* nearly normal, neither anæmic nor congested; a little serum under the arachnoid and in the ventricles, hardly more than is usual in death from other causes.

The foregoing pages contain all which we have seen of asphyxia and syncope, after chloroform. Will they not justify the assertion that death from these causes should seldom occur?

In producing artificial respiration, we have not found it necessary to lift the epiglottis and draw forward the tongue, according to the proceeding of M. Ricord. Neither have the galvanic battery and the use of diffusible stimulants been imperatively required.

Finally, if any should expect the suggestion of a scheme for managing the various forms of disease comprehensively classed "*Mania-a-potu*," we would answer, the subject is large and difficult. Science does not yet fully illuminate it. In the field of nervous pathology, speculation has projected theories, observation has gathered facts. Each has done good service. The science of the physician equips and instructs the doctor, the art of the doctor endorses and seals the physician. The mind which commissions all its faculties and reviews all their work, will not rest in any system of rules, which must be in great measure empirical.

The management of these cases should be *par excellence* independent.

With present light upon this point, we shall resort to chloroform *only when other medication fails*, and then we shall not hesitate to seek any measure of its full effect which the occasion may indicate.

DOMESTIC SUMMARY.

Case of Cyanosis.—Dr. JOS. CARSON read the following very interesting report of a case of Cyanosis before the College of Physicians of Philadelphia (Dec. 3, 1856):—

"The subject of the following case having lived, in opposition to so many physical obstacles, during a surprisingly prolonged period of time, I have regarded all the details connected with its history as interesting and worthy of record, and have, therefore, taken considerable pains to note and preserve them.

"S. R. was born, in Philadelphia, January 26, 1836, and, at the time of his birth, was a perfect specimen of cyanosis. He passed through the stages of infancy with no unusual derangement of health, not having developed, however, as his brothers and sister, but remaining puny and contracted in his growth.

"In April, 1842, he was attacked by whooping-cough, which was of great severity in consequence of the difficulty of respiration on the occurrence of the

paroxysm, and attended, from time to time, with profuse hemorrhage from the lungs. From this he recovered slowly, and afterwards, until the winter of 1848, was apparently in good health. I had not occasion to inquire minutely into his condition prior to the attack mentioned, but, at that time, my attention was closely directed towards him, and subsequently, his case was studied attentively. When he was in the best state of physical existence, the following were the features presented: countenance rather dull, except when roused by emotion, with a leaden hue of the skin; expression of the eye clear, but the adnata permeated by deep crimson vessels; lips, gums, and tongue, purple; person small, but slowly increasing from year to year; extremities delicate, with a remarkable enlargement and incurvation (from curvature of the nails) of the ends of the fingers and toes, which were as deeply tintured as the lips and tongue. The chest was narrow and contracted, prominent in front, and evinced a series of phenomena which were constant until his health began to fail, viz., perfect resonance on both sides, before and behind; respiration louder than usual, with no marked signs of pulmonary embarrassment. The impulse of the heart was strong, extending half an inch further on the right side than natural, and seen conspicuously when the chest was exposed; the frequency of beat amounted to eighty per minute. The action of the heart was accompanied with both sounds, the first sound most feeble, and also a peculiar blowing sound, which was perceptible not only when the ear was applied directly over the heart, but at some distance on the sides of the chest. He participated in the active exercises of boys, at which times I noticed that his respiration was much hurried, but he did not appear to suffer, had a good appetite, good spirits, and an active, inquiring mind, which led him to apply himself to his studies, and to excel in such as were presented in succession with advancing age.

"In the year 1843, with the view of determining the effect of position upon the cyanosed condition, Dr. Pepper and myself instituted the following experiments:—

"1. When laid upon his back, with his shoulders moderately elevated, the chest presented some prominence over the cardiac region. Impulse of the heart not strong, beats eighty per minute; dulness on percussion of the cardiac region; pulse regular, but feeble; in the carotids, the same as at the wrist. *Bruit de soufflet* distinct. Respiration twenty per minute. The right hand was elevated for two minutes, when it lost its color; while the left, being pendant, increased in blueness. This trial was now reversed, with the same result.

"2. He was placed upon his left side, and, in thirteen minutes, the lividity in the lips and the hands, which were placed at rest, horizontally, was diminished, but the left side of the face, where it rested on the pillow, was more injected than the other. In fifteen minutes, no greater effect had taken place. He was now made to lie on his right side, and, in fifteen minutes, as much, but no greater, diminution of the blueness had occurred as when upon the left side.

"3. With the view to excite the circulation, we directed him to run up stairs and return. He then presented excessive lividity of the lips, cheeks, and hands, great difficulty of breathing, the heart acting tumultuously, and the pulse rapid and irregular. He was placed on his left side, and, in fifteen minutes, the condition was the same as when this had been practised in the previous experiment. He was again directed to run up stairs, and, on returning with the same symptoms, was laid on his *right side*. In fifteen minutes, the same diminution of colour took place, and calmness occurred as before, when he had been placed upon the left side, but not to a greater extent, or more rapidly.

"4. After inducing augmented blueness by the same exercise, he was laid upon his back, and here, again, it was ascertained that the excessive lividity disappeared with as much rapidity as when placed either on the right or left side.

"During the winter of 1848–9, he had an attack of hemorrhage from the lungs, connected with pneumonia, from which he recovered, and, in the spring, resumed his school duties, but his general health was not so good as previously. and, during the ensuing autumn, when the cold weather set in, he was obliged

to relinquish his studies, becoming a confirmed invalid, and evidently declining.

"April 25, 1850, I visited him, and noted the following symptoms: Much emaciation of the whole frame, with extreme delicacy of the upper and lower extremities; countenance pinched, of a leaden hue; eyes dull; lips and tongue of a pale purple; pulse, one hundred and sixteen, quick and thready; respiration thirty, sighing; impulse of the heart decided, but not forcible; sounds of the heart merged into a rough, rasping sound, heard over the whole front of the chest; respiratory murmur louder than natural in the right lung, both anteriorly and posteriorly. In the anterior of the *left* lung, the sounds were masked by that of the heart, but, posteriorly, the middle lobe presented some dulness on percussion, and a distinct, crepitant murmur. Some cough existed, especially at night, with thick, tenacious sputa. He could not remain long in the recumbent posture. Skin cold and moist; tongue coated; appetite poor; bowels regular; complained of erratic pains, and, of late, has suffered from prolapsus ani. Treatment sustaining, and to relieve his sufferings.

"August 1, 1850. From the time before specified, has been gradually failing; the emaciation has become extreme, and the difficulty of breathing has become so oppressive as to preclude repose in the recumbent position; respiration hurried, thirty-five per minute; pulse, quick, and tense; skin cool; mucous membranes becoming dry and foul; extremities swelling. The anterior of the chest presented the rough, blowing sound, with bare perception of the two sounds of the heart. There was dulness on both sides of the chest before and behind, and no respiratory murmur discoverable on either side, but, at the upper parts, tubular sounds, and some crepitation, or submucous râle.

"16th. Patient, after having suffered under almost agonizing pain through the chest, extending to the extremities, with difficulty of respiration, amounting to asphyxia, the lividity of the face and hands becoming extreme, and cold, clammy perspiration covering his whole body, died at 2 P. M.

"*Post-mortem Examination*.—Sixty-eight hours after death an autopsy was made. The body was exceedingly thin, and the blue tinge of the skin very apparent. The examination was made by my friend, Dr. F. W. Sargent, from which I took the following notes:—

"*Chest*.—Upon laying bare the sternum, and removing it, strong adhesions were overcome. On endeavouring to remove the lungs, they were found bound to the sides of the chest by strong membranous connections, the result of pleuritis on both sides, but firmer on the left. *Lungs* filled with tubercles as large as peas, as well as in smaller masses, congested, and in some portions hepatized, the posterior portions of both in a state approximating softening, sinking in water. Pericardium adherent firmly to both right and left lung, containing f3iss of serum. The heart was located with its right edge under the centre of the sternum, the base opposite the second rib, and the apex between the fifth and sixth ribs, length three inches, transverse diameter three inches two lines, much distended with blood, and filled with soft coagula. Auricles distended; *foramen ovale* open, large enough to admit the forefinger (one-half inch in diameter). The *right and left ventricles communicated with each other*, there existing, in fact, but one cavity, the septum being wanting, with the exception of half an inch at the lower part, formed, apparently by a transverse development of the columnæ carneæ. The diameter of the opening between the ventricles was one and seven-eighths inches. The thickness of the walls of the ventricles was very nearly equal—five lines. The substance of the entire organ was flabby. The circumference of the aorta, at its origin, was two and one-sixteenth inches—that of the pulmonary artery was one and five-eighths inches. One of the muscular papillares of the tricuspid valve had its origin at the posterior wall of the right ventricle lower than usual; valve of the *foramen ovale* natural; the mitral valves, normal, as well as the semilunar of the aorta and pulmonary artery.

"Liver, large, deeply-coloured; kidneys, firm—apparently natural. The abdominal organs healthy.

"There are several points worthy of note in the history of this case. The subject of it lived exactly fourteen and a half years, and, from the time of his

recovery from hooping-cough in the spring of 1842, until he was attacked by pneumonia in the winter of 1848, appeared to be in good health. The cyanosed condition, although modifying his growth, and producing the peculiar phenomena connected with it, which have been mentioned, did not affect his spirits, or produce hebetude, but, on the contrary, his mind was active and capable of effort. When in the best state of health, as reported in the notes, his respiration presented perfect resonance on both sides, and was louder than usual. Without apparent pulmonary embarrassment, except when in exercise, yet the extreme engorgement to which the lungs could be subjected was shown by the profuse hemorrhage which occurred during the attack of hooping-cough. From the date of the attack of pneumonia, a difficulty in his respiration exhibited itself, becoming more and more serious in proportion to the advancing disease of the pulmonary structure and its accompanying hypostasis, until, under this combination of local circumstances, he succumbed after an unusually prolonged struggle. *Post-mortem* examination revealed a heart without the septum between the ventricles and patulous foramen ovale, with a marked disparity between the openings of the aorta and pulmonary artery, and disease of the lungs of the most serious nature.

"The first aspect of the case from the resemblance to a single heart, might induce the belief that the cyanosis depended upon an equal commingling of venous and arterial blood in the general circulation; this is the causation of the disease which has been adopted by several authorities. Untenable as this supposition has been shown to be by the occurrence of just such malformation in cases where no cyanosis existed, this case does not present this sole aberration; an inequality existed, of a very anomalous character, between the aorta and the pulmonary artery. By referring to the admirable paper of M. Bizot,¹ it will be found that the circumference of the opening of the aorta, at the age of fifteen years, in the male, is twenty-two and three-fourths lines, while the circumference of the opening of the pulmonary artery is twenty-three and three-fourths lines (the French measurements have been reduced to the English). If we compare the measurements of the same openings, in the heart under consideration, with these, it will be seen that, for the aorta, there is given two and one-sixteenth inches, or twenty-four and three-fourths lines, which is two lines more than natural, and for the pulmonary artery there is given one and five-eighths inches, or nineteen and one-half lines, which is less than natural by four and one-fourth lines. In the normal state of the heart, the opening of the pulmonary artery exceeds that of the aorta by a line, while, in this case, it is less than the aorta orifice, the difference between them amounting to five and one-fourth lines, a little less than half an inch. It cannot be doubted, then, that in this slight enlargement on the one side, and decided contraction on the other, there existed a cause of embarrassment to the circulation, which places the case in the category of those produced by pulmonary difficulty. That the heart had difficulty in emptying itself, is apparent from the constant bellows murmur, which increased as disease of the structure of the lungs set in, and from the strong impulse perceptible on inspection, which accompanied the action of the organ. The walls of both ventricles exhibit a departure from the normal thickness, that of the left exceeding the natural measurement by a line, and that of the right augmented three lines; or, contrary to the usual structural arrangement, which gives four lines for the thickness of the wall of the left ventricle, and one and one-half for the right, they were nearly equal, thus more closely conforming to the idea of a single ventricular cavity. Whether this augmented thickness was congenital or acquired, cannot be determined, but, from the length and breadth of the organ corresponding to the standard measurement, we are induced to believe it was the former.

"That difficulty in the pulmonary circulation did exist, although, in the early portion of the history of the case, not sufficiently marked to arrest attention, is clear from the ready occurrence of hemorrhage first under the influence of hooping-cough, and then of pneumonia. The condition of the lungs as

¹ *Rocherches sur le Cœur et le Système Arteriel chez l'Homme*, par J. Bizot (de Genève). Mémoires de la Société Médicale d'Observation, tom. i., Paris.

found, was, in a great measure, the result of fixed hypostatic congestion, on which had engrafted itself the tubercular element.

"We have been induced to report the case as confirmatory of the views entertained by our lamented fellow-member, Dr. Moreton Stillé, and so well sustained in his inaugural thesis on cyanosis, published in the *American Journal of Medical Sciences*."—*Quarterly Summary of the Trans. Coll. Phys. Phila.*, vol. iii. No. 2.

Supra-Renal Capsules.—DR. A. CLARK exhibited to the New York Pathological Society (Jan. 28, 1857) some small sections of the supra-renal capsules of a patient who had been under the care of Dr. Taylor, in whom it was thought that no disease of the capsules existed, at the post-mortem, notwithstanding that marked discoloration of the skin that Dr. Taylor has described in his paper on the subject. Dr. Taylor left a small piece for his examination. He began somewhat in the dark, inasmuch as he had never examined these organs microscopically. The capsules have an external investment, from which fibres penetrate into the interior of the organ. The substance in the interior seems to be the proper organ. It is composed of a vast number of granular cells, in most of which there is a nucleus; the cells are of a large size, and some of them elongated; here there can be recognized a nucleus and nucleoli, but not in all of them. Between these cells is a moderate amount of fibrous tissue; the organ is most extraordinarily supplied with nerves. Where the nerves go, he cannot tell, for the piece examined was too short. It seems to him that the nervous element is an important part. The arrangement of the cells is somewhat linear, though not strictly so; there being a certain amount of areolar tissue running between them; this, then, seems to be the structure. He found no opening in any of these cells, but the whole interior is lined with a countless number of extremely minute and slightly yellowish granules, the office of which, he supposes, can be found out when we find what is the office of similar cells in the thyroid glands and spleen. These cells seem to have no communication with each other. In the examination of a section of the supra-renal capsules in a person who died of tuberculous disease, this is the appearance; but, in Dr. Taylor's specimen, there is a world of fatty matter; the cells are full of oil globules, like fatty degeneration in the liver and kidneys; almost all the cells are so laden with this fatty substance, either in the form of globules, or in a crystalline form, that they become opaque. There was also a great quantity of oil spread over the whole field; in other words he takes it to be a fatty degeneration; and so far from being free from disease, he regarded it as very heavily diseased, although its bulk is not increased. The fibres are increased, and it seems probable that there is a double degeneration; an increase in the fibrous element, and afterwards a contraction to compensate for what would have been increased by addition of the oil.—*New York Journ. of Med.*, March, 1857.

Successful Employment of the "Ready Method in Asphyxia," in a case of Poisoning by Laudanum.—DR. LEWIS read the following case before the Society of Statistical Medicine (Jan. 12, 1857): "On the 15th of August, 1856, a young man, Mr. J., æt. about 28 years, sound constitution and temperate habits, dined and passed the evening with a friend, in the course of which he was heard to complain of pain in his left side about the region of the heart, for which mustard was applied.

At ten o'clock he left his friend's residence, and made his appearance at his hotel about midnight, and shortly after retired to his room.

In the morning, the door of his room was forcibly opened, and he was found lying upon his back; his respiration stertorous, and not exceeding five or six to the minute; his pulse slow and full; pupils contracted; countenance livid; exhibiting no sign of consciousness. An attempt was made to arouse the patient by dashing cold water upon the face and chest, shaking, applying the salts of ammonia to the nose; but so profound was the coma, that no indication of consciousness could be elicited. Weak brandy and water was next introduced into the mouth, and an attempt made to produce deglutition by