

fessed, is more favourable than that of any army of former times or of other nations. It is possible, we think, to raise it in this respect to a still more favourable grade—to reduce still further the danger of sickness and mortality in our soldiers, to bring it to a still nearer approximation to what it is among men of the same age and stamina of constitution in civil life. There is no reason whatever why in a time of peace the health of the soldier should be less secure, or his life in greater danger, than is the case in the best class of his fellow-citizens at home. Even during a period of actual service much may be done towards improving the sanitary condition of the army by placing it under the care of surgeons well versed in the science of health, and invested with sufficient executive authority to have executed promptly whatever they may deem necessary for sustaining the health and vigour of the soldiery, so far as these measures can be carried out without interfering with any important military movement.

The essay of Dr. Jarvis is one adapted to interest and instruct all who feel any interest in the well-being and efficiency of our army. It presents a series of reliable statistics drawn, as far as possible, from official reports in reference to the ratio of sickness and mortality of military bodies in peace and war compared with the ratio in civil life—and the source and extent of the disease, resulting in invaliding or death, to which they are liable. He examines in detail the supposed danger to the soldier; the sickness and mortality in civil life, compared with the sickness and mortality of the army in peace and in war; comparing the condition, in this respect, of the armies of the United States in the war of 1812–14, for the conquest of Mexico, and during the existing rebellion, with that of the different armies of Europe. The dangers incident to battles upon land and at sea; the want of sanitary preparations for war are inquired into, and the difference between the conditions of civil and military life pointed out. The errors committed by government in respect to its ministrations for the protection of the health of the army and their effects are considered, and a general notice given of the results of the sanitary reforms already accomplished.

The subjects of which the author treats, it is evident, are throughout well selected; all his facts are aptly chosen and carefully arranged and collated; while his general conclusions are fairly deducible from his premises.

D. F. C.

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ART. XXIV.—*Dentition and its Derangements. A Course of Lectures delivered in the New York Medical College.* By A. JACOBI, M.D., Professor of Infantile Pathology and Therapeutics, etc. 12mo. pp. 172. New York: 1862. Baillière Brothers.

THE leading object of Dr. Jacobi in this little volume of lectures, is to prove that dentition, which is a purely physiological process, has been unjustly accused of being the cause of the various morbid phenomena which so frequently occur in conjunction with it. The several morbid conditions so frequently observed during the period of teething, according to Dr. Jacobi, have an origin altogether independent of the act of dentition. In the establishment of this thesis he is necessarily led into an examination of the pathology of the more prominent ailments of infancy and childhood.

Although we cannot say that we are entirely convinced of the accuracy of all the teachings of our author, we nevertheless have been particularly interested in the perusal of his lectures—as well those which discuss the physiological history of the process of dentition, as the series especially devoted to a consideration of the nature and etiology of the affections which usually occur in conjunction with the cutting of the teeth.

It is very evident that the formation, development, and protrusion through the gums of the teeth, are purely physiological acts, and, like all other normal acts of the living organism, are performed, in the healthy subject, without pain, inconvenience, or disturbance of any kind. That, however, in children who are

morbidly excitable—who are badly nourished, and exposed to bad hygienic conditions generally, who are, from any cause, strongly predisposed to the occurrence of morbid action, the process of dentition may become the exciting cause of disease of a most serious character. is so well established by the repeated observations of the physicians of all times and all places, that the fact cannot be gainsaid. That the strictly physiological actions of either of the organs will, under certain predispositions to disease, whether in the system at large, or in the organ itself, give rise to pathological results, is a well established observation; so, also, in respect to dentition, though, under conditions strictly normal, it is accomplished without suffering or disturbance in any portion of the system, it is very certain that, when there is present a proneness to disease, teething is often attended by morbid phenomena, more or less intense—and thus may become the exciting cause of some serious malady.

It is unquestionably true that a large number, we would say the greater majority of infants cut their teeth without any bad symptoms—it is equally true that the morbid phenomena which may be observed to precede or accompany the protrusion of the teeth, are not in every case dependent directly or remotely upon the process of dentition, but that their causes are to be sought for in a predisposition dependent upon the age of the infant, and the peculiar physiological condition then present—the normal predominance of activity in certain of the vital functions, while their production is directly traceable to errors in feeding, deficient personal cleanliness, impure air, defective ventilation, want of due exercise, accidental injuries, and the like. It is not the less true, however, that the morbid phenomena referred to are very generally aggravated by dentition, while the latter, as already remarked, may become the sole exciting cause whenever there exists an abnormal predisposition to morbid action in one or other of the organs. Dentition will also be attended with more or less suffering in those instances in which the evolution of several of the teeth takes place simultaneously or in quick succession, or where there is a deficient development of the jaws. ;

The foregoing positions will, we are confident, be found fully established by the experience of every observing physician. It is very certain that in the lectures before us nothing has been adduced which in the slightest degree tends to show their inaccuracy. The entire chain of reasoning by which Dr. Jacobi has endeavoured to show that in our estimate of the etiology of the diseases of infancy the action of dentition must be entirely omitted is particularly specious and inconclusive. We do not, however, wish to be understood as including in one general condemnation the lectures before us. On the contrary they are replete with important truths, well set forth, and adapted to remove many errors into which physicians have fallen in respect to the maladies of infant life and their relationship to dentition. The study of these lectures will be found profitable to every one engaged in the practice of medicine. If their publication should do no other good than to put a stop to the unnecessary, often injurious, cutting and hacking of the gums of the infant, which is every day performed, and often repeated several times, at short intervals, in the same subject, under the pretence of favouring by it a more easy and rapid protrusion of the teeth, and in this manner guarding against the occurrence of disease, or facilitating the removal of this when it has already made its appearance, they will have answered an excellent purpose.

"I see few indications," Dr. Jacobi remarks, "for the lancet during the period of dentition. You may cut where the gums are an impediment to the protrusion of a tooth, or where the gums themselves are the seat of a disease giving rise to general symptoms, especially of the nervous system. Thus, inflammation of the gums justifies an incision for the sake of relieving the tension of the tissue. Even mild cases in very irritable children may be treated in the same way. But the incision, especially when repeated, may itself become a cause of irritation, sometimes evidenced by the fact that during the prevalence of follicular or other form of stomatitis the gums will be found covered with superficial ulcerations. I need not add, that while exudative processes, such as diphtheria, are active in the system, every wound inflicted will give rise to new diphtheritic deposits. I, then, scarify the gums in cases of intense local hyperæmia and inflammation—where the loss of a few drops of blood, which can have no effect on either the

healthy or diseased general system, is decidedly advantageous. I should scarify in cases of convulsions in tender, irritable patients, in whom I found the gums swollen, and where a correct diagnosis could be made instantaneously—especially in such as had been once relieved by the same operation: for I must confess that once or twice in my life, not oftener, I have observed the instant termination of an attack of convulsions after I had lanced the gums. But always be sure that the tooth is near the surface. I know that new cicatrices will easily tear, but old ones will not, and I have seen trouble to arise from teeth which were cut down upon weeks or months before they were ready to pierce the gums; a practice always annoying to the child, and useless or even dangerous, and certainly not indicative of much power of diagnosis or therapeutical knowledge in the doctor. It is not uncommon, even, to find a retardation of the protrusion of a tooth when you expected it daily to appear. A child becomes sick, with symptoms of fever and others of a local character; you lance the gums, and not only expect the appearance of the tooth, but a termination, also, of the untoward symptoms. Nothing of the kind occurs. On the contrary, the child gets thinner and sicker, and yet no tooth. Where the system is intensely suffering, where emaciation takes place and nutrition is interfered with, it is but natural that the growth of a tooth should also stop. In such cases you may safely predict that no tooth will appear before the child gets well, or, at least, better. During convalescence the tooth appears. It made its appearance after the organism had been sufficiently restored to allow of phosphate of lime being spared for the building of teeth, but the mother says, that, because the child was well when the tooth came, therefore, the child suffered from its tooth."

"In one of my first lectures, I spoke of the direct injury done to the tooth by incisions. The consistency of the tooth is the less the younger the child; and that harm may be done to a tooth by the action of a hard, sharp instrument cannot be denied. If you expect to effect anything by an incision, you must be sure to divide the gum down to the tooth. But you can scarcely avoid injuring the tooth in cutting down upon it. If this danger exists, and it certainly does, it is the more to be feared from those often repeated scarifications recommended by Marshall Hall, and others. Thus, while your incisions are of no use in the present, they are positively injurious in the future."

There is much sound practical sense in the foregoing remarks—all may profit by them.

We agree very fully with the remarks made by Dr. Jacobi in reference to the leading diseases of the mouth, their etiology and pathology, and their relation to dentition, which in the great majority of cases is merely that of coincidence.

The author's account of retro- or latero-pharyngeal abscess is particularly interesting. He describes it as one of the sequelæ of ordinary pharyngitis. It is attended with rather severe pain, and considerable exudation. A semi-spherical, livid, brilliant tumour being seen or felt on the posterior or lateral wall of the pharynx. Respiration and deglutition are difficult—there is cough, with thickness or hoarseness of voice—emaciation—high fever, sometimes attended with convulsions, which may also be induced by the swelling of the tissues of the neck, and the consequent compression of the venous trunks. The abscess generally forms pretty slowly, and in this may sometimes be distinguished from acute tonsillitis or stenotic disease of the larynx. If the contents of the abscess be evacuated by an incision or spontaneous rupture, the danger of suffocation is removed, and soon all severe symptoms will disappear. The spontaneous evacuation of the pus is not to be depended on; in the majority of cases an incision will be necessary. There is imminent danger of suffocation from the mere size of the abscess, and the attendant swelling of the surrounding tissue, especially the velum palati and posterior nares. Danger may also arise from the extension of disease to the larynx, increasing thus the liability to suffocation, or from the occurrence of grave consecutive diseases, or the Eustachian tube may become affected, and impairment of hearing or total deafness ensue. The danger from the impairment of deglutition is less imminent, want of food can be endured longer than the want of air, while food can be introduced in case of necessity by other avenues than the mouth and œsophagus.

Retro-pharyngeal abscess is seated in the cellular tissue interposed between

the pharynx and vertebral column. The lecturer divides these abscesses into three classes: 1st. The idiopathic, resulting from simple inflammation of the mouth, pharynx, and surrounding tissues, or a metastatic process connected with an acute exanthem, typhoid fever, or pyæmia. The majority of cases occur before or during the first dentition—this period of infancy being that in which there is the greatest tendency to catarrhal affections of the throat. The prognosis is generally favourable if incision of the abscess be not neglected. Metastatic abscesses, however, are of a more dangerous character, being merely the symptoms of a more or less grave affection of the general system. Idiopathic abscesses require in their first stage a rational antiphlogistic local treatment. Cold applied both internally and externally; the first by the slowly swallowing of ice, or gargling with iced water, with or without the addition of alum; the local application of nitrate of silver, or alum, scarifications of the larynx, leeches. When suppuration cannot be prevented, warm poultices are to be resorted to, excepting when there is danger from cerebral congestion; here warm emollient gargles are to be preferred. Internal treatment is available only so far as it is adapted to diminish fever or other dangerous symptoms. When the danger of suffocation is imminent, the abscess should be opened at once by incision and its cavity washed out by gargling or syringing with water, but in the case of what are termed metastatic abscesses, to promote their healing the application of stimulants and astringents is required—such as chlorate of lime, alum, nitrate of silver, tannic acid, while the proper internal treatment must be determined by the nature of the general affection. Bark, and the mineral acids will generally be indicated.

The second form of retro-pharyngeal abscess includes such as result from the suppuration (usually in scrofulous subjects) of inflamed lymphatic glands and the surrounding tissues. They are rarely met with previously to the completion of the period of the first dentition. The prognosis is in general sufficiently favourable, provided the original suppuration is not excessive and the general morbid condition of the system is moderate in extent. The local treatment will be much the same as in the case of idiopathic abscess. The primary attention is to be paid, however, to the original glandular abscess, the pus of which may often be evacuated by an incision from without, with the effect, also, of relieving the consecutive pharyngeal and laryngeal injection. The gravity of the general dyscratic affection calls for serious consideration. The employment of the iodides of potassium and of iron, cod-liver oil, pure air, sufficient exercise, attention to the skin, and a generous diet, will be strongly indicated.

A third form of retro-pharyngeal abscess is dependent upon suppuration seated in the cervical vertebrae or their ligaments, occurring at a period of life earlier than the preceding form. The prognosis in these cases is very unfavourable. The opening of the abscess should be deferred as long as possible; it can only afford temporary relief to the difficulty of respiration and deglutition. The treatment must be by quietude, posture, cold applications, leeches, mercury and wine, nitrate of potassa, tartar emetic, iodide of potassium, and preparations of iron, according to the indications presented in each case. Little dependence, however, is to be placed in any course of treatment, as the disease will in nearly every case terminate fatally, either very suddenly or after the gradual occurrence of great exhaustion attended with hectic fever. Dr. Jacobi knew of one case, occurring in a young man, to terminate suddenly while the patient was in the act of turning his head on the pillow. Examination after death showed the ligaments of the spinal column at its upper portion to be destroyed to within a few shreds, which were torn by the last movement of the patient, allowing the process of the vertebra dentata to enter the foramen magnum and destroy the tissue of the medulla oblongata.

There is scarcely a lecture in the volume before us which does not present matter worthy of especial notice. The entire validity of the views presented by the author in respect to the nature, seat, and causation of the several infantile diseases of which he treats we may not, it is true, be able always to acknowledge; the facts and arguments, nevertheless, by which he has endeavoured to enforce and illustrate them are always deserving of a candid examination, and in many instances they are, it must be admitted, particularly suggestive. We should be

pleased, could we spare the space, to present an analysis of the greater portion of those of the lectures which are of a strictly pathological character.

Dr. Jacobi's exposition of the nature and causation of infantile convulsions are particularly interesting; we shall confine our notice, however, to his account of laryngismus stridulus or the crowing inspiration of children.

The first stage of this affection he refers to the sudden occurrence of complete apnoea. Respiration is suddenly and completely arrested for some seconds; the face becomes bloodless and pale, and, finally, cyanotic, if the paroxysm is of any duration. The skin is cool, and the action of the heart scarcely perceptible, the entire muscular system being, according to Dr. Jacobi, in a state of paralysis. In the second stage he supposes that reaction commences. The recurrent branch of the pneumogastric nerve excites the function of the muscles of the glottis, and the spinal nerves that of the other respiratory muscles, so as to cause a forced, deep "crowing" inspiration. During the third stage reaction becomes complete. By short convulsive expirations the functions of the respiratory organs are restored to their normal condition. Attacks of great intensity and long continuance are commonly attended with contractions of the hands, and even general tonic convulsions of the trunk and lower extremities. In some cases general eclampsia has been known to accompany the attack, but to return without any recurrence of the latter; or the laryngismus may recur without the eclampsia. Involuntary evacuations, caused, as Dr. Jacobi supposes, by paralysis of the sphincter muscles, have been observed during the attack. The paroxysms of laryngismus recur at longer or shorter intervals; several may take place in a single day. The disease is seldom fatal. It may last for months and even years. When death ensues during the attack it is in the first stage.

The mildness or severity of the attacks of laryngismus depend as well upon the constitution of the patient as upon the nature of the occasional causes.

Dr. Jacobi believes that the symptoms of the first stage of this affection can only be explained by supposing a functional disturbance of the nervous system—paralysis, perhaps, of the medulla oblongata, or of the nervous centres generally. Paralysis of the muscles of the glottis alone, he remarks, would not be sufficient to produce all the symptoms of the first stage of laryngismus; these do not occur upon the division of a recurrent nerve. The division of both nerves gives rise pretty rapidly to suffocation, but not suddenly, while the lungs and brain become engorged, whereas the morbid anatomy of laryngitis shows entire absence of hyperæmia of the brain, and little or no blood in the heart and cutaneous veins. Death in laryngismus, according to Dr. J., ensues precisely in the same manner as it does in animals in whom the medulla oblongata has been divided.

The crowing inspiration is very correctly described as a symptom which does not exclusively appertain to laryngismus stridulus; it is met with also in laryngeal catarrh, in which disease the muscles of the vocal cords are spasmodically affected.

We agree fully with our author in the remark that the cause of laryngismus is to be sought for in some affection of the nervous centres. It is very evident that no disease of any portion of the respiratory organs is attended by symptoms similar to those which characterize laryngismus, and in the examination of the bodies of those who have fallen victims to it no lesions of the heart and lungs sufficient to explain its production have been detected. Goëlis long ago noticed the occurrence of a mild form of laryngismus in connection with chronic hydrocephalus. Keitel found, besides a hypertrophied and degenerated thymus gland, softness of the skull, with large fontanels and sutures, a softened and hyperæmic condition of the cerebral tissues, with softness of the medulla oblongata and congestion of its membranes, and a tablespoonful of clear serum at the upper portion of the vertebral canal. In one case Marshall Hall found abnormal hardness of the medulla oblongata. Evans relates that, in a child with congenital spina bifida, an attack of laryngismus was produced whenever the fluid in the sac was pressed into the vertebral canal. Caspari found the substance of the spinal cord solid and white, with considerable injection of its dura mater. The sinuses of the brain were enormously distended with thin black-coloured

blood, and the substance of both cerebral hemispheres and of the cerebellum very soft. The phrenic nerves were unusually hard, while the pneumogastric nerve "appeared more similar to the brain." Facts of this kind could be greatly multiplied, showing the dependence, in a large number of instances, of laryngismus upon lesions of the nervous centres. It is to be recollected, however, that diseased conditions of the brain and medulla oblongata, precisely similar to those met with in patients who have perished from an attack of laryngismus, frequently occur without the occurrence of any symptom, even the slightest, of the latter. We believe that, in every instance, laryngismus is strictly a nervous affection, dependent, in very many cases, on disease of the nervous centres, but more frequently upon reflex irritations having their origin in some morbid condition of remote organs. We cannot admit, however, that the condition of the nervous centres giving rise to laryngismus is, as Dr. Jacobi supposes, that of paralysis; we can find nothing in the symptoms, course, and termination of the disease that would seem to indicate the presence of paralysis of certain of the respiratory muscles, but rather in every case their spastic contraction.

There is a morbid condition met with during infancy which, according to our author, is a very fruitful cause of laryngismus; that is, a rachital softening of the parietal and occipital bones, but especially of the latter, to which the term *craniotabes* has been applied. Kopp, Caspari, Pagenstecher, Hirsch, Keitel, Hachman, Günther, Landsberg, Hauff, Staub, and other of the old writers collected by Elsasser in his work on the "Soft Occiput," without recognizing the intimate connection of the two morbid conditions, have described cases of laryngismus in which softening of the parietal and occipital bones constituted one of the most prominent lesions. It is very certain, however, that after the most careful analysis of the observations on record in respect to rachital softening of the cranium, that laryngismus will occur in numerous instances where there does not exist a trace of *craniotabes*. Dr. Jacobi says:—

"I hardly remember a case of my own, in which symptoms of general rhachitis and of rhachidal softening of the cranium were absent in laryngismus; this much is certain, that the majority of cases of laryngismus or crowing inspiration, depend on *craniotabes* and general rhachitis. It is always the great predisposing cause, and thus, the last and proximate causes of an attack of our disease, as we find them enumerated in the text-books—such as fright, anger, cough, protrusion of a tooth, etc., are assigned their right place of but occasional and temporary importance. By the defective condition of the cranium the brain is more liable to external injuries from concussion caused by quick movements of the head, or an improper mode of carrying on the arm, violent rocking, etc.—from lying on too hard a pillow, from too high a temperature both artificial and solar, and, finally, we must not overlook the importance of such alterations as invariably take place, in rhachitis and *craniotabes*, in the nutrition of the system and the condition of the brain. At all events you will hardly ever be mistaken in your etiology, when on meeting with a case of laryngismus, you examine for *craniotabes*. Whenever a child with laryngismus is brought to me, my first attention is given to the occiput and epiphyses, as my first prescription is almost invariably the regulation of the diet and the use of iron."

Our experience in respect to the frequency of the connection between laryngismus and a rachitic condition of the infantile system, with softening and wasting of the cranial bones, differs from that of Dr. Jacobi. We have certainly observed laryngismus to occur often in rickety children, but more frequently in those in whom no trace of a rachitic taint was to be detected. The infants most liable to it are, according to our experience, pale and anæmic, excitable and fretful, who awaken, as it were, in a fright upon the slightest noises made in their vicinity, and who are wakeful, restless, and unsatisfied unless constantly on the move.

The most frequent exciting causes we should say, are sudden and abrupt movements of the child, especially any undue jolting of the head and body, improper food, and an impure, stagnant, or irritating condition of atmosphere. Among these the most effective in the production of laryngismus are the improper quality of the infant's food, and its exposure to malarious influences.

This fact, which is recognized by the major portion of the more recent

English and French writers on the disease, it is important to keep constantly in mind, inasmuch as, in a very large number of cases, it is in vain to attempt the arrest of laryngitis by any course of treatment until the little patient is put upon a proper and well regulated diet, and subjected to the influence of a free, pure atmosphere of suitable temperature. This alone we have often known to suspend the paroxysms, which had previously been of frequent occurrence.

Although laryngismus is a disease of the period of infant life, during which the process of teething is most active, we have no reason for supposing that the latter is a very common exciting cause of it; when, however, the gum over the advancing teeth is greatly swollen, hard and red, the mouth is hot, and the child evidently suffers pain in its mouth, a careful incision of the gum is equally advisable in children labouring under laryngismus as it would be under any other circumstances.

We earnestly commend the lectures of Dr. Jacobi to the favourable consideration of the profession at large. They are replete with instruction in relation to many important points connected with infantile pathology which are not well understood by a large number of practitioners. The author has done ample justice to his subject and its literature, whether the lectures are viewed simply as presenting an exposition of the physiology of dentition and its derangements, or as a general review of the nature, seat, and causes of those diseases which are usually observed during the period of dentition. His object is evidently the attainment of correct views in respect, more especially, to the etiology of the maladies just referred to, and although he may, perchance, have ignored to too great an extent the influence of dentition in their production, his teachings cannot fail to have the beneficial effect of directing the medical practitioner to a recognition of the entire want of foundation for the common opinion so long entertained by the public as well as by the profession, everywhere, that teething is usually a painful process, and one of the most usual and efficient of the predisposing and exciting causes of the maladies of infancy. An opinion not simply unsupported by facts, but one adapted to cause, on the one hand, the true etiology of many important diseases to be overlooked; and on the other hand, to lead to the adoption of a practice always useless and often mischievous.

D. F. C.

ART. XXV.—*Addresses delivered by Dr. BURROWS, Dr. WALSH, Mr. PAGET, and Dr. SHARPEY, at the Thirtieth Annual Meeting of the British Medical Association, held at the Royal College of Physicians, London, in 1862.* London, 1862. 12mo. pp. 98.

THE British Medical Association, it is well known, was formed several years ago by incorporating with the Provincial Medical Association the members of the medical profession in the metropolis. Its recent meeting, the first held in London, was remarkable for the large number of gentlemen who took part in its business, and for the character of the Addresses with which it was opened. These, which have been thought worthy of preservation in a separate form, are contained in the pamphlet before us.

The first of them, delivered by the President, Dr. Burrows, sets forth the grounds which have been made familiar to us in our own State Medical Societies and in the American Medical Association, and upon which the union of physicians for the diffusion of medical knowledge, and the maintenance of the honour and interests of the medical profession, are to be promoted and secured. In England, as at home, it has been found that the medical profession has profited by the existence of the Association in the development of new ardour in the pursuit of scientific discovery, in the improvement of practical medicine and surgery, and in the elevation of the professional status, while its influence upon the national legislature in favour of improved laws for the organization and government of the medical profession has been very salutary. Dr. Burrows sketches very appropriately the tendency of modern civilization to nationalize