Rapport sur le traitement du crétinisme dans l'établissement de l'Abendberg (Canton de Berne) : extrait des lettres publiées par le docteur Guggenbühl à Zurich, 1846.

USE OF THE DEAD TO THE LIVING.

Every one desires to live as long as he can. Every one values health "above all gold and treasure." Every one knows that, as far as his own individual good is concerned, protracted life and a frame of body sound and strong, free from the thousand pains which flesh is heir to, are unspeakably more important than all other objects, because life and health must be secured before any possible result of any possible circumstance can be of consequence to him. In the improvement of the art which has for its object the preservation of health and life, every individual is, therefore, deeply interested. An enlightened physician and a skilful surgeon, are in the daily habit of administering to their fellow men more real and unquestionable good, than is communicated, or communicable, by any other class of human beings to another. Ignorant physicians and surgeons are the most deadly enemies of the community: the plague itself is not so destructive: its ravages are at distant intervals, and are accompanied with open and alarming notice of its purpose and power; theirs are constant, silent, secret; and it is while they are looked up to as saviours, with the confidence of hope, that they give speed to the progress of disease, and certainty to the stroke of death.

It is deeply to be lamented that the community, in general, are so entirely ignorant of all that relates to the art and the

science of medicine. An explanation of the functions of the animal economy; of their most common and important deviations from a healthy state; of the remedies best adapted to restore them to a sound condition, and of the mode in which they operate, as far as that is known, ought to form a part of every course of liberal education. The profound ignorance of the people on all these subjects is attended with many disadvantages to themselves, and operates unfavorably on the medical character. In consequence of this want of information, persons neither know what are the attainments of the man in whose hands they place their life, nor what they ought to be; they can neither form an opinion of the course of education which it is incumbent upon him to follow, nor judge of the success with which he has availed himself of the means of knowledge which have been afforded him. There is one branch of medical education in particular, the foundation, in fact, on which the whole superstructure must be raised, the necessity of which is not commonly understood, but which requires only to be stated to be perceived. Perhaps it is impossible to name any one subject which it is of more importance that the community should understand. It is one in which every man's life is deeply implicated: it is one on which every man's ignorance or information will have some influence. We shall, therefore, show the kind of knowledge which it is indispensable that the physician and the surgeon should possess: we shall illustrate, by a reference to particular cases, the reason why knowledge of this kind cannot be dispensed with: and we shall explain, by a statement of facts, the nature and extent of the obstacles which at present oppose the acquisition of this knowledge. We repeat there is no subject in which every reader can be so immediately and deeply interested, and we trust that he will give us his calm and unprejudiced attention.

The basis of all medical and surgical knowledge is anatomy. Not a single step can be made either in medicine or surgery, considered either as an art or a science, without it. This should seem self-evident, and to need neither proof nor

illustration: nevertheless as it is useful occasionally to contemplate the evidence of important truth, we shall show why it is that there can be no rational medicine, and no safe surgery, without a thorough knowledge of anatomy.

Disease, which it is the object of these arts to prevent and to cure, is denoted by disordered function: disordered function cannot be understood without a knowledge of healthy function; healthy function cannot be understood without a knowledge of structure; structure cannot be understood unless it be examined.

The organs on which all the important functions of the human body depend are concealed from the view. There is no possibility of ascertaining their situation and connections, much less their nature and operation, without inspecting the interior of this curious and complicated machine. The results of the mechanism are visible: the mechanism itself is concealed, and must be investigated to be perceived. The operations of nature are selmon entirely hidden from the human eye; still less are they obtruded upon it, but over the most curious and wonderful operations of the animal economy so thick a veil is drawn, that they never could have been perceived without the most patient and minute research. The circulation of the blood, for example, never could have been discovered without dissection. Notwithstanding the partial knowledge of anatomy which must have been acquired by the accidents to which the human body is exposed, by attention to wounded men, by the observance of bodies killed by violence; by the huntsman in using his prey; by the priest in immolating his victims; by the augur in pursuing his divinations; by the slaughter of animals; by the dissection of brutes; and even occasionally by the dissection of the human body, century after century passed away, without a suspicion having been excited of the real functions of the two great systems of vessels, arteries, and veins. It was not until the beginning of the 17th century, when anatomy was ardently cultivated, and had made considerable progress, that the valves of the veins and of the heart were discovered,

and, subsequently, that the great Harvey, the pupil of the anatomist who discovered the latter, by inspecting the structure of these valves; by contemplating their disposition; by reasoning upon their use, was led to suspect the course of the blood, and afterwards to demonstrate it. Several systems of vessels in which the most important functions of animal life are carried on, the absorbent system, for example, and even that portion of it which receives the food after it is digested, and which conveys it into the blood, are invisible to the naked eye, except under peculiar circumstances: whence it must be evident, not only that the interior of the human body must be laid open, in order that its organs may be seen; but that these organs must be minutely and patiently dissected, in order that their structure may be understood.

The most important diseases have their seat in the organs of the body; an accurate acquaintance with their situation is, therefore, absolutely necessary, in order to ascertain the seats of disease; but for the reasons already assigned, their situation cannot be learnt, without the study of anatomy. In several regions, organs the most different in structure and function are placed close to each other. In what is termed the epigastric region, for example, are situated the stomach, the liver, the gall bladder, the first portion of the small intestine, the duodenum, and a portion of the large intestine, the colon; each of these organs is essentially different in structure and in use, and is liable to distinct diseases. Diseases, the most diversified, therefore, requiring the most opposite treatment, may exist in the same region of the body; the discrimination of which is absolutely impossible, without that knowledge which the study of anatomy alone can impart.

The seat of pain is often at a great distance from that of the affected organ. In disease of the liver, pain is generally felt at the top of the right shoulder. The right phrenic nerve sends a branch to the liver: the third cervical nerve, from which the phrenic arises, distributes numerous branches to the neighbourhood of the shoulder: thus is established a

nervous communication between the shoulder and the liver. This is a fact which nothing but anatomy could teach, and affords the explanation of a symptom which nothing but anatomy could give. The knowledge of it would infallibly correct a mistake into which a person who is ignorant of it would be sure to fall: in fact, persons ignorant of it do constantly commit the error. We have known several instances in which organic disease of the liver has been considered, and treated as rheumatism of the shoulder. In each of these cases, disease in a most important organ might have been allowed to steal on isidiously until it became incurable: while a person, acquainted with anatomy, would have detected it at once, and cured it without difficulty. Many cases have occurred of persons who have been supposed to labour under disease of the liver, and who have been treated accordingly: on examination after death, the liver has been found perfectly healthy, but there has been discovered extensive disease of the brain. Disease of the liver is often mistaken for disease of the lungs: on the other hand, the lungs have been found full of ulcers, when they were supposed to have been perfectly sound, and when every symptom was referred to disease of the liver. Persons are constantly attacked with convulsions, children especially; convulsions are spasms: spasms, of course, are to be treated by antispasmodics. This is the notion amongst people ignorant of medicine: it is the notion amongst old medical men: it is the notion amongst half-educated young ones. All this time these convulsions are merely a symptom; that symptom depends upon and denotes, most important disease in the brain: the only chance of saving life, is the prompt and vigorous application of proper remedies to the brain; but the practitioner whose mind is occupied with the symptom, and who prescribes antispasmodics, not only loses the time in which alone any thing can be done to snatch the victim from death, but by his remedies absolutely adds fuel to the flame which is consuming his patient. In disease of the hip-joint pain is felt, not in the hip, but, in the early stage of the disease, at the knee. This also depends on nervous communi-

cation. The most dreadful consequences daily occur from an ignorance of this single fact. In all these cases error is inevitable, without a knowledge of anatomy: it is scarcely possible with it: in all these cases error is fatal: in all these cases anatomy alone can prevent the error, anatomy alone can correct it. Experience, so far from leading to its detection, would only establish it in men's minds, and render its removal impossible. What is called experience is of no manner of use to an ignorant and unreflecting practitioner. In nothing does the adage, that it is the wise only who profit by experience, receive so complete an illustration as in medicine. A man who is ignorant of certain principles, and who is incapable of reasoning in a certain manner, may have daily before him, for fifty years, cases affording the most complete evidence of the truth of those principles, and of the importance of the deduction to which they lead, without observing the one, or deducing the other. Hence the most profoundly ignorant of medicine are often the oldest members of the profession, and those who have had the most extensive practice. A medical education, founded on a knowledge of anatomy, is, therefore, not only indispensable to prevent the most fatal errors, but to enable a person to obtain advantage from those sources of improvement which extensive practice may open to him.

To the surgeon, anatomy is eminently what Bacon has so beautifully said knowledge in general is: it is power—it is power to lessen pain, to save life, and to eradicate diseases, which, without its aid, would be incurable and fatal. It is impossible to convey to the reader a clear conception of this truth, without a reference to particular cases; and the subject is one of such extreme importance, that it may be worth while to direct the attention for a moment to two or three of the capital diseases which the surgeon is daily called upon to treat. Aneurism, for example, is a disease of an artery, and consists of a preternatural dilatation of its coats. This dilatation arises from debility of the vessel, whence, unable to resist the impetus of the blood, it yields, and is dilated into a sac. When When once the disease is induced, it commonly goes on to

increase with a steady and uninterrupted progress, until at last it suddenly bursts, and the patient expires either instantaneously from loss of blood, or by degrees from repeated losses. When left to itself, it almost uniformly proves fatal in one or other of these modes; yet, before the time of Galen, no notice was taken of this terrible malady. The ancients, indeed, who believed that the arteries were air tubes, could have had no conception of the existence of an aneurism. Were the number of individuals in Europe, who are now annually cured of aneurism, by the interference of art, to be assumed as the basis of a calculation of the number of persons who must have perished by this disease, from the beginning of the world to the time of Galen, it would convey some conception of the extent to which anatomical knowledge is the means of saving human life.

The only way in which it is possible to cure this disease is, to produce an obliteration of the cavity of the artery. This is the object of the operation. The diseased artery is exposed, and a ligature is passed around it, above the dilatation, by means of which the blood is prevented from flowing into the sac, and inflammation is excited in the vessel; in consequence of which its sides adhere together, and its cavity becomes obliterated. The success of the operation depends entirely on the completeness of the adhesion of the sides of the vessel, and the consequent obliteration of its cavity. This adhesion will not take place unless the portion of the artery to which the ligature is applied be in a sound state. If it be diseased, as it almost always is, near the seat of the aneurism, when the process of nature is completed by which the ligature is removed, hemorrhage takes place, and the patient dies just as if the aneurism had been left to itself. For a long time the ligature was applied as close as possible to the seat of the aneurism: the aneurismal sac was laid open in its whole extent, and the blood it contained was scooped out. The consequence was, that a large deep-seated sore, composed of parts in an unhealthy state, was formed: it was necessary to the cure that this sore should suppurate, granu-

late, and heal: a process which the constitution was frequently unable to support. Moreover, there was a constant danger that the patient would perish from hemorrhage, through the want of adhesion of the sides of the artery. The profound knowledge of healthy and of diseased structure, and of the laws of the animal economy by which both are regulated, which John Hunter had acquired from anatomy, suggested to this eminent man a mode of operating, the effect of which, in preserving human life, has placed him high in the rank of the benefactors of his race. This consummate anatomist saw, that the reason why death so often followed the common operation was, because that process which was essential to its success was prevented by the diseased condition of the artery. He perceived that the vessel, at some distance from the aneurism, was in a sound state; and conceived that, if the ligature were applied to this distant part, that is, to a sound instead of a diseased portion of the artery, this necessary process would not be counteracted. To this there was one capital objection, that it would often be necessary to apply the ligature around the main trunk of an artery, before it gives off its branches, in consequence of which the parts below the ligature would be deprived of their supply of blood, and would therefore mortify. So frequent and great are the communications between all the arteries of the body, however, that he thought it probable, that a sufficient supply would be borne to these parts through the medium of collateral branches. For an aneurism in the ham, he, therefore, boldly cut down upon the main trunk of the artery which supplies the lower extremity; and applied a ligature around it, where it is seated near the middle of the thigh, in the confident expectation that, though he thus deprived the limb of the supply of blood which it received through its direct channel, it would not perish. His knowledge of the processes of the animal economy led him to expect that the force of the circulation being thus taken off from the aneurismal sac, the progress of the disease would be stopped; that the sac itself, with all its contents,

would be absorbed; that by this means the whole tumour would be removed, and that an opening into it would be unnecessary. The most complete success followed this noble experiment, and the sensations which this philosopher experienced when he witnessed the event, must have been exquisite, and have constituted an appropriate reward for the application of profound knowledge to the mitigation of human suffering. After Hunter followed Abernethy, who, treading in the footsteps of his master, for an aneurism of the femoral, placed a ligature around the external iliac artery; lately the internal iliac itself has been taken up, and surgeons have tied arteries of such importance, that they have been themselves astonished at the extent and splendour of their success. Every individual on whom an operation of this kind has been successfully performed, is snatched by it from certain and inevitable death!

The symptom by which an aneurism is distinguished from every other tumour is, chiefly, its pulsating motion. But when an aneurism has become very large, it ceases to pulsate; and when an abscess is seated near an artery of great magnitude, it acquires a pulsating motion; because the pulsations of the artery are perceptible through the abscess. The real nature of cases of this kind cannot possibly be ascertained, without a most careful investigation, combined with an exact knowledge of the structure and relative position of all the parts in the neighbourhood of the tumour. Pelletan, one of the most distinguished surgeons of France, was one day called to a man, who, after a long walk, was seized with a severe pain in the leg, over the seat of which appeared a tumour, which was attended with a pulsation so violent that it lifted up the hand of the examiner. There seemed every reason to suppose that the case was an aneurismal swelling. This acute observer, however, in comparing the affected with the sound limb, perceived in the latter a similar throbbing. On careful examination he discovered that, by a particular disposition in this individual, one of the main arteries of the leg (the anterior tibial) deviated from its

usual course, and instead of plunging deep between the muscles, lay immediately under the skin and fascia. The truth was, that the man in the exertion of walking had ruptured some muscular fibres, and the uncommon distribution of the artery gave to this accident these peculiar symptoms. The real nature of this case could not possibly have been ascertained, but by an anatomist. The same surgeon has recorded the case of a man, who, having fallen twice from his horse, and experienced for several years considerable uneasiness in his back, was at length afflicted with acute pain in the abdomen. At the same time an oval, irregularly circumscribed tumour made its appearance in the right flank. It presented a distinct fluctuation, and had all the appearance of a collection of matter depending on caries of the vertebræ. The pain was seated chiefly at the lower portion of that part of the spine which forms the back, which was, moreover, distorted; and this might have confirmed the opinion that the case was a lumbar abscess with caries. Pelletan, however, who well knew that an aneurism, as it enlarges, may destroy any bone in its neighbourhood, saw that the disease was an aneurism, and predicted that the patient must perish. On opening the body (for the man lived only ten days after Pelletan first saw him) an aneurismal tumour was discovered, which nearly filled the cavity of the abdomen. If this case had been mistaken for lumbar abscess, and the tumour had been opened with a view of affording an exit to the matter, the man would have died in a few seconds. There is no surgeon of discernment and experience whose attention has not been awakened, and whose sagacity has not been put to the test, by the occurrence of similar cases in his own practice. The consequence of error is almost always instantaneously fatal. The catalogue of such disastrous events is long and melancholy. Richerand has recorded, that Ferrand, head surgeon of the Hotel-Dieu, mistook an aneurism in the armpit for an abscess; plunged his knife into the swelling, and killed the patient. De Haen speaks of a person who died in consequence of an opening

which was made, contrary to the advice of Boerhaave in a similar tumour at the knee. Vesalius was consulted about a tumour in the back, which he pronounced to be an aneurism; but an ignorant practitioner having made an opening into it, the patient instantly bled to death. Nothing can be more easy than to confound an aneurism of the artery of the neck with a swelling of the glands in its neighbourhood: with a swelling of the cellular substance which surrounds the artery; with abscesses of various kinds; but if a surgeon were to fall into this error, and to open a carotid aneurism, his patient would certainly be dead in the space of a few moments. It must be evident, then, that a thorough knowledge of anatomy is not only indispensable to the proper treatment of cases of this description, but also to the prevention of the most fatal mistakes.

There is nothing in surgery of more importance than the proper treatment of hemorrhage. Of the confusion and terror occasioned by the sight of a human being, from whom the blood is gushing in torrents, and whose condition none of the spectators is able to relieve, no one can form an adequate conception, but those who have witnessed it. In all such cases there is one thing proper to be done, the prompt performance of which is generally as certainly successful, as the neglect of it is inevitably fatal. It is impossible to conceive of a more terrible situation than that of a medical man who knows not what to do on such an emergency. He is confused; he hesitates: while he is deciding what measures to adopt, the patient expires: he can never think of that man's death without horror, for he is conscious that, but for his ignorance he might have averted his patient's fate. The ancient surgeons were constantly placed in this situation, and the dread inspired by it retarded the progress of surgery more than all other causes put together. Not only were they terrified from interfering with the most painful and destructive diseases, which experience has proved to be capable of safe and easy removal, but they were afraid to cut even the most trivial tumour. When they ventured to remove a part,

they attempted it only by means of the ligature, or by the application of burning irons. When they determined to amputate, they never thought of doing so, until the limb had mortified, and the dead had separated from the living parts; for they were absolutely afraid to cut into the living flesh. They had no means of stopping hemorrhage, but by the application of astringents to the bleeding vessels, remedies which were inert; or of burning irons, or boiling turpentine, expedients which were not only inert but cruel. Surgeons now know that the grand means of stopping hemorrhage is compression of the bleeding vessel. If pressure be made on the trunk of an artery, though blood be flowing from a thousand branches given off from it, the bleeding will cease. Should the situation of the artery be such as to allow of effectual external pressure, nothing further is requisite: the pressure being applied, the bleeding is stopped at once: should the situation of the vessel place it beyond the reach of external pressure, it is necessary to cut down upon it, and to secure it by the application of a ligature. Parè may be pardoned for supposing that he was led to the discovery of this invaluable remedy by inspiration of the Deity. By means of it the most formidable operations may be undertaken with the utmost confidence, because the wounded vessels can be secured the moment they are cut: by the same means the most frightful hemorrhages may be effectually stopped: and even when the bleeding is so violent as to threaten immediate death, it may often be averted by the simple expedient of placing the finger upon the wounded vessel, until there is time to tie it. But it is obvious that none of these expedients can be employed, and that these bleedings can neither be checked at the moment, nor permanently stopped, without such a knowledge of the course of the trunks and branches of vessels, as can be acquired only by the study of anatomy.

The success of amputation is closely connected with the knowledge of the means of stopping hemorrhage. Not to amputate, is often to abandon the patient to a certain and miserable death. And all that the surgeon formerly did, was

to watch the progress of that death: he had no power to stop or even to retard it. The fate of Sir Philip Sidney is a melancholy illustration of this truth. This noble-minded man, the light and glory of his age, was cut off in the bloom of manhood, and the midst of his usefulness, by the wound of a musket-bullet in his left leg, a little above the knee, "when extraction of the ball, or amputation of the limb," says his biographer, "would have saved his inestimable life: but the surgeons and physicians were unwilling to practise the one, and knew not how to perform the other. He was variously tormented by a number of surgeons and physicians for three weeks." Amputation indeed was never attempted except where mortification had itself half performed the operation. The just apprehension of an hemorrhage which there was no adequate means of stopping, checked the hand of the boldest surgeon, and quailed the courage of the most daring patient—and if ever the operation was resorted to, it almost always proved fatal: the patient generally expired, according to the expression of Celsus, "*in ipso opere.*" How could it be otherwise? The surgeon cut through the flesh of his patient with a red hot knife: this was his only means of stopping the hemorrhage: by this expedient he sought to convert the whole surface of the stump into an eschar; but this operation, painful in its execution, and terrible in its consequences, when it even appeared to succeed, succeeded only for a few days; for the bleeding generally returned and proved fatal as soon as the sloughs or dead parts became loose. Plunging the stump into boiling oil, into boiling turpentine, into boiling pitch, for all these means were used, was attended with no happier result, and after unspeakable suffering, almost every patient perished. In the manner in which amputation is performed at present, not more than one person in twenty loses his life in consequence of the operation, even taking into the account all the cases in which it is practised in hospitals. In private practice, where many circumstances favour its success, it is computed that 95 persons out of 100 recover from it, when it is performed at a proper time, and in a proper manner. It seems

impossible to exhibit a more striking illustration of the great value of anatomical knowledge.

But if there be any disease which, from the frequency of its occurrence, from the variety of its forms, from the difficulty of discriminating between it, and other maladies, and from the danger attendant on almost all its varieties, requires a combination of the most minute investigation, with the most accurate anatomical knowledge, it is that of hernia. This disease consists of a protrusion of some of the viscera of the abdomen, from the cavity in which they are naturally contained, into a preternatural bag, composed of the portion of the peritoneum (the membrane which lines the abdomen) which is pushed before them. It is computed that one sixteenth of the human race are afflicted with this malady. It is sometimes merely an inconvenient complaint, attended with no evil consequences whatever: but there is no form of this disease, which is not liable to be suddenly changed, and by slight causes, from a perfectly innocent state, into a condition which may prove fatal in a few hours. The disease itself occurs in numerous situations; it may be confounded with various diseases; it may exist in the most diversified states; it may require, without the loss of a single moment, a most important and delicate operation; and it may appear to demand this operation, while the performance of it may really be not only useless, but highly pernicious.

The danger of hernia depends on its passing into that state which is technically termed strangulation. When a protruded intestine suffers such a degree of pressure, as to occasion a total obstruction to the passage of its contents, it is said to be strangulated. The consequence of pressure thus producing strangulation is, the excitement of inflammation: this inflammation must inevitably prove fatal unless the pressure be promptly removed. In most cases this can be effected only by the operation. Two things, then, are indispensable: first, the ability to ascertain that the symptoms are really produced by pressure, that is, to distinguish the disease from the affections which resemble it; and secondly, when this is effected,

to perform the operation with promptitude and success. The distinction of strangulated hernia from affections which resemble it, often requires the most exact knowledge and the most minute investigation. The intestine included in a hernial sac may be merely affected with colic, and thus give rise to the appearance of strangulation. It may be in a state of irritation, produced, for example, by unusual fatigue; and from this cause may be attacked with the symptoms of inflammation. Inflammation may be excited in the intestine, by the common causes of inflammation, which the hernia may have no share in inducing, and of which it may not even participate. Were this case mistaken, and the operation performed, it would not only be useless, but pernicious: while the attention of the practitioner would be diverted from the real nature of the malady; the prompt and vigorous application of the remedies which alone could save the patient would be neglected, and he would probably perish. On the other hand, a very small portion of intestine may become strangulated, and urgently require the operation. But there may be no tumor; all the symptoms may be those, and, on a superficial examination, only those, of inflammation of the bowels. Were the real nature of this case mistaken, death would be inevitable. Nothing is more common than fatal errors of this kind. It is only a few months ago, that a physician was called in haste to a person who was said to be dying of inflammation of the bowels. Before he reached the house the man was dead. He had been ill only three days. On looking at the abdomen, there was a manifest hernia; the first glance was sufficient to ascertain the fact. The practitioner in attendance had known nothing of the matter; he had never suspected the real nature of the disease, and had made no inquiry which could have led to the detection of it. Here was a case which might probably have been saved, but for the criminal ignorance and inattention of the practitioner. Whenever there are symptoms of inflammation of the bowels, examination of the abdomen is indispensable; and the life of the patient will often depend on the care and accuracy with which the investigation is made.

But it is possible that inflammation may attack the parts included in the hernial sac, without arising from the hernia itself. The inflammation may be produced by the common causes of inflammation: there may be no pressure: there may be no strangulation: the swelling may be the seat, not the cause of the disease. In this case, too, the operation would be both useless and pernicious. Now all these are diversities which it is of the highest importance to discriminate. In some of them life depends on the clearness, accuracy, and promptitude, with which the discrimination is made. Promptitude is of no less consequence than accuracy. If the decision be not formed and acted on at once, it will be of no avail. The rapidity of the progress of this disease is often frightful. We have mentioned a case in which it was fatal in three days, but it not unfrequently terminates fatally in less than twenty-four hours. Sir Astley Cooper mentions a case in which the patient was dead in eight hours after the commencement of the disease. Larrey has recorded the case of a soldier in whom a hernia took place, which was strangulated immediately. He was brought to the "ambulance" instantly, and perished in two hours with gangrene of the part, and of the abdominal viscera. This was the second instance which had occurred to this surgeon of a rapidity thus appalling. What clearness of judgment, what accuracy of knowledge, what promptitude of decision, are necessary to treat such a disease with any chance of success!

The moment that a case is ascertained to be strangulated hernia, an attempt must be made to liberate the parts from the stricture, and to replace them in their natural situation. This is first attempted by the hand, and the operation is technically termed the *taxis*. The patient must be placed in a particular position; pressure must be made in a particular direction; it is impossible to ascertain either, without an accurate knowledge of the structure of the parts. If pressure be made in a wrong direction, and in a rough and unscientific manner, the organs protruded instead of being urged through the proper opening are bruised against the parts which oppose

their return. Many cases are on record, in which gangrene and even rupture of the intestine have been occasioned in this manner. When the parts cannot be returned by the hand, assisted by those remedies which experience has proved to be beneficial, the operation must be performed without the delay of a moment. To its proper performance two things are necessary. First, a minute anatomical knowledge of the various and complicated parts which are implicated in it; and secondly, a steady, firm, and delicate command of the knife. In the first place, the integuments must be divided; the cellular substance which intervenes between the skin and the hernial sac must be removed, layer by layer, with the knife and the dissecting forceps; the sac itself must be opened: this part of the operation must be performed with the most extreme caution: the sac being laid open, the protruded organs are now exposed to view. The operator must next ascertain the exact point where the stricture exists; having discovered its seat, he must make his incision with a particular instrument, in a certain direction, to a definite extent. On account of the nature of the parts implicated in the operation, and the proximity of important vessels, life depends on an exact knowledge and a precise and delicate attention to all these circumstances. How can this knowledge be obtained, how can this dexterity be acquired without a profound acquaintance with anatomy, and how can this be acquired without frequent and laborious dissection? The eye must become familiar with the appearance of the integuments, with the appearance of the cellular substance beneath it, with the appearance of the hernial sac, and of the changes which it undergoes by disease; with the appearance of the various viscera contained in it, and of their changes; and the hand must pay that steady and prompt obedience to the judgment which nothing but knowledge and the consciousness of knowledge can command. Even this is not all. When the operation has been performed thus far with perfect skill and success, the most opposite measures are required according to the actual state of the organs contained in the sac. If they are agglutinated together, if portions of

them are in a state of mortification, to return them into the cavity of the abdomen in that condition would in general be certain death. Preternatural adhesion must be removed; mortified portions must be cut away: but how can this possibly be done without an acquaintance with healthy and diseased structure, and how can this be obtained without dissecting the organs in a state of health and of disease?

It has been stated that the progress of strangulated hernia to a fatal termination is often frightfully rapid; in certain cases to delay the operation, even for a very short period, is, therefore, to lose the only chance of success. But ignorant and half-informed surgeons are afraid to operate. They are conscious that the operation is one of immense importance: they know that in the hands of an operator ignorant of anatomy, it is one of extreme hazard: they therefore put off the time as long as possible: they have recourse to every expedient: they resort to every thing but the only efficient remedy, and when at last they are compelled by a secret sense of shame to try that, it is too late. All the best practical surgeons express themselves in the strongest language on the importance of performing the operation early, if it be performed at all. On this point there is a perfect accordance between the most celebrated practitioners on the continent, and the great surgeons of our own country: all represent, in many parts of their writings, the dangerous and fatal effects of delay. Mr. Hey in his Practical Observations, states that when he first began practice, he considered the operation as the last resource, and only to be employed when the danger appeared imminent. "By this dilatory mode of practice," says he, "I lost three patients in five, upon whom the operation was performed. Having more experience of the urgency of the disease, I made it my custom when called to a patient who had laboured two or three days under the disease, to wait only about two hours, that I might try the effect of bleeding (if that evacuation was not forbidden by some peculiar circumstance of the case) and the tobacco clyster. In this mode of practice I lost about two patients in nine, upon whom I operated. This comparison is

drawn from cases nearly similar, leaving out of the account those cases in which gangrene of the intestine had taken place. I have now, at the time of writing this, performed the operation thirty-five times; and have often had occasion to lament that I performed it too late, but never that I had performed it too soon."

These observations are sufficient to show the importance of anatomy in certain surgical diseases. The state of medical opinion, from the earliest ages to the present time, furnishes a most instructive proof of its necessity to the detection and cure of disease in general. The doctrines of the father of physic were in the highest degree vague and unmeaning. Every thing is resolved by Hippocrates into a general principle, which he terms nature; and to which he ascribes intelligence; which he clothes with the attribute of justice; and which he represents as possessing virtues and powers which he says are her servants, and by means of which she performs all her operations in the bodies of animals, distributes the blood, spirits, and heat, through all the parts of the body, and imparts to them life and sensation. He states that the manner in which she acts, is by attracting what is good or agreeable to each species, and retaining, preparing, and changing it: or, on the other hand, by rejecting whatever is superfluous or hurtful, after she has separated it from the good. This is the foundation of the doctrine of depuration, concoction, and crisis in fevers, so much insisted on by him and by other physicians after him; but when he explains what he means by nature, he resolves it into heat, which he says appears to have something immortal in it.

The great opponent of Hippocrates was Asclepiades. He asserted that matter, considered in itself, is of an unchangeable nature: that all perceptible bodies are composed of a number of small ones, termed corpuscles, between which there are interspersed an infinity of small spaces totally void of matter: that the soul itself is composed of these corpuscles: that what is called nature is nothing more than matter and motion: that Hippocrates knew not what he said when

he spoke of nature as an intelligent being, and ascribed to her various qualities and virtues: that the corpuscles, of which all bodies are composed, are of different figures, and consist of different assemblages: that all bodies contain numerous pores, or interstices, which are of different sizes: that the human body, like all other bodies, possesses pores peculiar to itself: that these pores are larger or smaller, according as the corpuscles which pass through them differ in magnitude: that the blood consists of the largest, and the spirits and the heat of the smallest. On these principles Asclepiades founded his theory of medicine. He maintains that, as long as the corpuscles are freely received by the pores, the body remains in its natural state: that, on the contrary, as soon as any obstacle obstructs their passage, it begins to recede from that state: that, therefore, health depends on the just proportion between these pores and corpuscles: that, on the contrary, disease proceeds from a disproportion between them: that the most usual obstacle arises from a retention of some of the corpuscles in their ordinary passages, where they arrive in too large a number, or are of irregular figures, or move too fast or proceed too slow: that phrensies, lethargies, pleurisies, burning fevers, for example, are occasioned by these corpuscles stopping of their own accord: that pain is produced by the stagnation of the largest of all these corpuscles, of which the blood consists: that, on the contrary, deliriums, languors, extenuations, leanness and dropsies derive their origin from a bad state of the pores, which are too much relaxed, or opened: that dropsy, in particular, proceeds from the flesh being perforated with various small holes which convert the nourishment received into them into water; that hunger is occasioned by an opening of the large pores of the stomach and belly: that thirst arises from an opening of the small pores: that intermittent fevers have the same origin: that quotidian fever is produced by a retention of the largest corpuscles; tertian fever by a retention of corpuscles somewhat smaller; and quartan fever by a retention of the smallest corpuscles of all.

Galen maintained that the animal body is composed of three principles, namely, the solids, the humours, and the spirits; that the solid parts consist of similar and organic: that the humours are four in number, namely, the blood, the phlegm, the yellow bile, and the black bile: that the spirits are of three kinds, namely, the vital, the animal, and the natural; that the vital spirit is a subtile vapour which arises from the blood, and which derives its origin from the liver, the organ of sanguification: that the spirits, thus formed, are conveyed to the heart, where, in conjunction with the air drawn into the lungs by respiration, they become the matter of the second species, namely, of the vital spirits; that in their turn the vital spirits are changed into the animal in the brain, and so on.

At last came Paracelsus, who was believed to have discovered the elixir of life, and who is the very prince of charlatans. He delivered a course of lectures on the theory and practice of physic at the University of Basle, which he commenced, by burning the works of Galen and Avicenna in the presence of his auditory. He assured his hearers that his shoe-latchets had more knowledge than both these illustrious authors put together: that all the academies in the world had not so much experience as his beard; and that the hair on the back of his neck was more learned than the whole tribe of authors. It was fitting that a person of such splendid pretensions should have a magnificent name. He, therefore, called himself Philippus Aureolus Theophrastus Paracelcus Bombast Von Hohenheim. He was a great chemist, and, like other chemists, he was a little too apt to carry into other sciences "the smoke and tarnish of the furnace." He conceived that the elements of the living system were the same as those of his laboratory, and that sulphur, salt, and quicksilver were the constituents of organized bodies. He taught that these constituents were combined by chemical operations; that their relations were governed by Archeus, a demon, who performed the part of alchemist in the stomach, who separated the poisonous from the nutritive part of the food, and who communicated the tincture by which the food

became capable of assimilation; that this governor of the stomach, this *spiritus vitæ*, this astral body of man, was the immediate cause of all diseases and the chief agent in their cure; that each member of the body had its peculiar stomach, by which the work of secretion was effected; that diseases were produced by certain influences, of which there were five in particular, viz. *ens estrale, ens veneni, ens naturale, ens spirituale,* and *ens deale;* that when the Archeus was sick, putrescence was occasioned, and that either *localiter* or *emunctorialiter*, &c. &c.

It would be leading to a detail which is incompatible with our present purpose, to follow these speculations, or to give an account of the doctrines of the mechanical physicians, who believed that every operation of the animal economy was explained by comparing it to a system of ropes, levers, and pulleys, united with a number of rigid tubes of different lengths and diameters, containing fluids which from variations in their impelling causes, moved with different degrees of velocity: or of the chemical physicians, whose manner of theorizing and investigating would have qualified them better for the occupation of the brewer or of the distiller than for that of the physician. All these speculations are idle fancies, without any evidence whatever to support them; and it has been argued that, for this very reason, they must have been without any practical result, and that, therefore, if they were productive of no benefit, they were, at least, innoxious. No opinion can be more false or pernicious. These wretched theories not only pre-occupied the mind, prevented it from observing the real phenomena of health and of disease, and the actual effect of the remedies which were employed, and thus put an effectual stop to the progress of the science; but they were productive of the most direct and serious evils. It is no less true in medicine than in philosophy and morals, that there is no such thing as innoxious error; that men's opinions invariably influence their conduct; and that physicians, like other men, act as they think. Asclepiades, whose mind was full of corpuscles and interstices, was intent on finding suita-

ble remedies, which he discovered in gestation, friction, and the use of wine. By various exercises he proposed, to render the pores more open, and to make the juices and corpuscles, the retention of which causes disease, to pass more freely. Hence he used gestation from the very beginning of the most burning fevers. He laid it down as a maxim that one fever was to be cured by another; that the strength of the patient was to be exhausted by making him watch and endure thirst, to such a degree, that for the first two days of the disorder he would not allow them to cool their mouths with a drop of water. Abernethy's regulated diet is luxurious living compared to his plan of abstinence. For the three first days he allowed his patients no aliment whatever; on the fourth, he so far relented as to give to some of them a small portion of food: but from others he absolutely withheld all nourishment till the seventh day. And this is the gentleman who laid it down as a maxim that all diseases are to be cured "*Tuto, celeriter et jucunde.*" To be sure he was a believer in the doctrine of compensation; and in the latter stage of their diseases endeavoured to recompense his patients for the privations he caused them to endure in the beginning of their illness. Celsus observes that though he treated his patients like a butcher during the first days of the disorder, he afterwards indulged them so far as to give directions for making their beds in the softest manner. He allowed them abundance of wine which he gave freely in all fevers; he did not forbid it even to those afflicted with phrenzy; nay, he ordered them to drink it till they were intoxicated; for, said he, it is absolutely necessary that persons who labour under phrenzy should sleep, and wine has a narcotic quality. To lethargic patients he prescribed it with great freedom, but with the opposite purpose of rousing them from their stupor. His great remedy in dropsy was friction, which, of course, he employed to open the pores. With the same view he enjoined active exercise to the sick; but what is a little extraordinary, he denied it to those in health.

Erisistratus, who was a great speculator, and whose theories

had the most important influence on his practice, banished bloodletting altogether from medicine, for the following notable reasons: because, he says, we cannot always see the vein we intend to open; because we are not sure we may not open an artery instead of a vein; because we cannot ascertain the true quantity to be taken; because if we take too little, the intention is not answered; if too much, we may destroy the patient; and because the evacuation of the venous blood is succeeded by that of the spirits, which thus pass from the arteries into the veins; wherefore, bloodletting ought never to be used as a remedy in disease. Yet, though he was thus cautious in abstracting blood, it must not be supposed that he was not a sufficiently bold practitioner. In tumour of the liver, he hesitated not to cut open the abdomen, and to apply his medicines immediately to the diseased organ; but though he took such liberties with the liver, he regarded with the greatest apprehension the operation of tapping in dropsy of the abdomen: because, said he, the waters being evacuated, the liver which is inflamed and become hard like a stone, is more pressed by the adjacent parts, which the waters kept at distance from it, whence the patient dies.

One physician conceived that gout originated from an effervescence of the synovia of the joints with the vitriolated blood: whence he recommended alcohol for its cure: a remedy for which the court of aldermen ought to have voted him a medal. A more ancient practitioner, who believed that the finger of St. Blasius was very efficacious "for removing a bone which sticks in the throat," maintained that gout was the "grand drier," and prescribed a remedy for it, which the patient was to use for a whole year, and to observe the following diet each month: in September, he must eat and drink milk; in October, he must eat garlic; in November, he is to abstain from bathing; in December, he must eat no cabbage; in January, he is to take a glass of pure wine in the morning; in February, to eat no beef; in March, to mix several things both in eatables and drinkables; in April, not to eat horse-

radish; nor, in May the fish called Polypus; in June he is to drink cold water in the morning; in July, to avoid venery; and, lastly, in August to eat no mallows.

A third physician deduced all diseases from inspissation of the fluids; hence he attached the highest importance to diluent drinks, and believed that tea, especially, is a sovereign remedy in almost every disease to which the human frame is subject: "tea," says Bentakoe, who is loudest in his praises of this panacea, and who, as Blumenback observes, "deserved to have been pensioned by the East India Company for his services,"—"tea is the best, nay, the only remedy for correcting viscidity of the blood, the source of all diseases, and for dissipating the acid of the stomach, as it contains a fine oleaginous volatile salt, and certain subtile spirits which are analogous in their nature to the animal spirits. Tea fortifies the memory and all the intellectual faculties: it will, therefore, furnish the most effectual means of improving physical education. Against fever there is no better remedy than forty or fifty cups of tea swallowed immediately after one another; the slime of the pancreas is thus carried off."

Another physician derived all diseases from a redundancy or deficiency of fire or water. He maintained that where the water predominated the fluids became viscid, and that hence arose intermittent fevers and anthritic complaints. His remedies are in strict conformity to his theory. These diseases are to be cured by volatile salts, which abound with fiery particles; venesection in any case is highly pernicious; these fiery medicines are the only efficacious remedies, and are to be employed even in diseases of the most inflammatory nature. "Life," says Dr. Brown, "is a forced state;" it is a flame kept alive by excitement; every thing stimulates; some substances too violently; others not sufficiently; there are thus two kinds of debility, indirect and direct, and to one or other of these causes must be referred the origin of all diseases. According to this doctrine the mode of cure is simple: we have nothing to do but to supply, to moderate, or to abstract stimuli. Typhous fever, in this system, is a disease of extreme

debility: we must therefore give the strongest stimulants. Consumption and apoplexy, also, are diseases of debility; of course the remedies are active stimulants. Humanity shudders, and with reason, at the application of such doctrines to practice. And not less destitute of reason, and not less dangerous in practice, is the great doctrine of debility promulgated by Cullen. This celebrated professor taught that the circumstance which invariably characterized fever, that which constituted its essence, was debility. The inference was obvious, that, above all things, the strength must be supported. The consequence was, that bloodletting was neglected, and that bark and wine were given in immense quantities, in cases in which intense inflammation existed. The practice was in the highest degree mortal; the number of persons who have perished in consequence of this doctrine is incalculable. So far then is it from being true that medical theories are of no practical importance, that there is the closest possible connection between the speculations of the physician in his closet, and the measures which he adopts at the bedside of his patient. Truth to him is a benignant power which stops the progress of disease, protracts the duration of life, and mitigates the suffering it may be unable to remove: error is a fearfully active and tremendously potent principle. There is not a medical prejudice which has not slain its thousands, nor a false theory which has not immolated its tens of thousands. The system of medicine and surgery which is established in any country, has a greater influence over the lives of its inhabitants than the epidemic diseases produced by its climate, or the decisions of its government concerning peace and war. The devastations of the yellow fever will bear no comparison with the ravages committed by the Brunonian system; and the slaughter of the field of Waterloo counts not of victims, a tithe of the number of which the Cullenian doctrine of debility can justly boast. Anatomy alone will not teach a physician to think, much less to think justly; but it will give him the elements of thinking; it will furnish him with the means of correcting his errors; it will

certainly save him from some delusions, and will afford to the public the best shield against his ignorance, which may be fatal, and against his presumption, which may be devastating.

We have entered into this minute detail at the hazard, we are aware, of tiring the reader; but in the hope of leaving on his mind a more distinct impression of the importance of anatomical knowledge than could possibly be produced by a mere allusion to the circumstances which have been explained. In all ages formidable obstacles have opposed the prosecution of anatomical investigations. Among these, without doubt, the most powerful has its source in a feeling which is natural to the heart of man. The sweetest, the most sacred associations are indissolubly connected with the person of those we love. It is with the corporeal frame that our senses have been familiar: it is that on which we have gazed with rapture: it is that which has so often been the medium of conveying to our hearts the thrill of ecstacy. We cannot separate the idea of the peculiarities and actions of a friend from the idea of his person. It is for this reason that "every thing which has been associated with him acquires a value from that consideration; his ring, his watch, his books, and his habitation. The value of these as having been his is not merely fictitious; they have an empire over my mind; they can make me happy or unhappy; they can torture and they can tranquillize; they can purify my sentiments and make me similar to the man I love; they possess the virtue which the Indian is said to attribute to the spoils of him he kills, and inspire me with the powers, the feelings, and the heart of their preceding master." It is nothing, the survivor may justly say, to tell me, when disease has completed its work, and death has seized its prey, that that body, with which are connected so many delightful associations, is a senseless mass of matter; that it is no longer my friend, that the spirit which animated it and rendered it lovely to my sight and dear to my affections, is gone. I know that it is gone. I know that I never more shall see the light of intelligence brighten that countenance, nor benevolence beam in that eye,

nor the voice of affection sound from those lips: that which I loved, and which loved me, is not here; but here are still the features of my friend; this is his form, and the very particles of matter which compose this dull mass, a few hours ago were a real part of him, and I cannot separate them, in my imagination, from him. And I approach them with the profounder reverence: I gaze upon them with the deeper affection because they are all that remain to me. I would give all that I possess to purchase the art of preserving the wholesome character and rosy hue of this form that it might be my companion still: but this is impossible: I cannot detain it from the tomb: but when I have "cast a heap of mould upon the person of my friend and taken the cold earth for its keeper," I visit the spot in which it is deposited with awe: it is sacred to my imagination: it is dear to my heart. There is a real and deep foundation for these feelings in human nature: they arise spontaneously in the bosom of man, and we see their expression and their power in the customs of all nations, savage as well as civilized, and in the conduct of all men, the most ignorant and uncultivated no less than the most intelligent and refined. It has been the policy of society to foster these sentiments. It has been conceived that the sanctity which attaches to the dead, is reflected back in a profounder feeling of respect for the living; that the solemnity with which death is regarded elevates, in the general estimation, the value of life; and that he who cannot approach the mortal remains of a fellow-creature without an emotion of awe, must regard with horror every thing which places in danger the life of a human being. Religion has contributed indirectly, but powerfully, to the strength and perpetuity of these impressions; and superstition has availed herself of them to play her antics and to accomplish her base and malignant purposes. It is not the eradication of these feelings that can be desired, but their control: it is not the extinction of these natural and useful emotions that is pleaded for, but that they should give way to higher considerations when these exist. Veneration for the dead is connected with the noblest and

sweetest sympathies of our nature: but the promotion of the happiness of the living is a duty from which we can never be exonerated.

In ancient times the voice of reason could not be heard. Superstition, and customs founded on superstition, excited an influence which was neither to be resisted nor evaded. Dissection was then regarded with horror. In the warm countries of the East the pursuit must have been highly offensive and even dangerous, and it was absolutely incompatible with the notions and ceremonies universally prevalent in those days. The Jewish tenet of pollution must have formed an insuperable obstacle to the cultivation of anatomy amongst that people. By the Egyptians every one who cut open a dead body was regarded with inexpressible horror. The Grecian philosophers so far overcame the prejudice as occasionally to engage in the pursuit, and the first dissection on record was one made by Democritus of Abdera, the friend of Hippocrates, in order to discover the course of the bile. The Romans contributed nothing to the progress of the art: they were content with propitiating the deities who presided over health and disease. They erected on the Palatine Mount a temple to the goddess Febris, whom they worshipped from a dread of her power. They also sacrificed to the goddess Ossipaga, who, it seems, presided over the growth of the bones, and to another styled Carna, who took care of the viscera, and to whom they offered bean-broth, and bacon, because these were the most nutritious articles of diet. The Arabians adopted the Jewish notion of pollution, and were thus prohibited by the tenets of their religion from practising dissection. Abdollaliph, who flourished about the year 1200, a man of learning and a teacher of anatomy, never saw and never thought of a human dissection. In order to examine and demonstrate the bones, he took his students to burial-grounds and earnestly recommended them instead of reading books, to adopt that method of study: yet he seems to have had no conception that the dissection of a recent subject might be a still better method of learning. Christians were equally hostile to dissection. Pope Boniface

the VIIIth issued a bull prohibiting even the maceration and preparation of skeletons. The priests were the only physicians, and so greatly did they abuse the office they assumed, that the evil at length became too intolerable to be borne. The church itself was obliged to prohibit the priesthood from interfering with the practice of medicine. All monks and canons who applied themselves to physic, were threatened with severe penalties, and all bishops, abbots, and priors who connived at their misconduct were ordered to be suspended from their ecclesiastical functions. But it was not till three hundred years after this interdiction, that, by a special bull which permitted physicians to marry, their complete separation from the clergy was effected.

In the 14th century, Mundinus, professor at Bologna, astonished the world by the public dissection of two human bodies. In the 5th century, Leonardo da Vinci contributed essentially to the progress of the art, by the introduction of anatomical plates which were admirably executed. In the 16th century, the Emperor, Charles the Vth, ordered a consultation to be held by the divines of Salamanca, to determine whether it was lawful, in point of conscience, to dissect a dead body in order to learn its structure. In the 17th century, Cortesius, professor of anatomy at Bologna, and afterwards professor of medicine at Messina, had long begun a treatise on practical anatomy which he had an earnest desire to finish, but so great was the difficulty of prosecuting the study even in Italy, that in 24 years he could only twice procure an opportunity of dissecting a human body, and even then with difficulty and in a hurry; whereas, he had expected to have done so, he says, once every year, according to the custom of the famous academies of Italy. In Muscovy, until very lately, both anatomy and the use of skeletons were positively forbidden; the first as inhuman, and the latter as subservient to witchcraft. Even the illustrious Luther was so biassed by the prejudices of his age, that he ascribed the majority of diseases to the arts of the devil, and found great fault with physicians when they attempted to account for them by na-

tural causes. England acquired the bad fame of being the country of witches, and opposed almost insuperable obstacles to the cultivation of anatomy. Even at present the prejudices of the people on this subject are violent and deeply rooted. The measure of that violence may be estimated by the degree of abhorrence with which they regard those persons who are employed to procure the subjects necessary for dissection. In this country there is no other method of obtaining subjects but that of exhumation; aversion to this employment may be pardoned; dislike to the persons who engage in it is natural, but to regard them with detestation, to exult in their punishment, to determine for themselves its nature and measure, and to endeavour to assume the power of inflicting it with their own hands, is absurd. Magistrates have too often fostered the prejudices of the people, and afforded them the means of executing their vengeance on the objects of their aversion. The press, with a few honourable exceptions, has uniformly allied itself with the ignorance and violence of the vulgar, and has done every thing in its power to inflame the passions, which it was its duty to endeavour to soothe. It is notorious that the winter before last there was scarcely a week in which many of the papers did not contain the most exaggerated and disgusting statements; the appetite which could be gratified with such representations was sufficiently degraded; but still more base was the servility which could pander to it.

As one among many of the cases which illustrate this bad feeling, we may refer to that of Samuel Clark, who was indicted at the Essex Quarter Sessions, in January 1824, for feloniously stealing at Little Leighs, on the 26th of December, a woman's shift, a bed-gown, a night-cap, and a pair of cotton stockings, the property of James Chinnery. It appeared in evidence, that a young woman the wife of a labouring man named James Chinnery, had been buried in Little Leighs Church-yard, on Sunday, the 21st of December. Previous to her death she expressed a wish to be interred in a night-cap, shift, bed-gown, and cotton stockings, and her request had been complied with. The body was discovered on the morning

of the 26th, in a ditch near the churchyard. A few rods from this spot was found a horse yoked to a chaise cart and tied to a tree. It appeared that "the box under the chaise cart was calculated to hold a couple of human bodies, when rolled up; and on examining it, a most offensive odour proceeded from it, as if it had been recently used in the prisoner's *unhallowed* occupation." The prisoner owned this horse and cart, and this is the whole of the evidence, at least, as stated in the report of the trial, which implicated him in the robbery of the grave. Under these circumstances, the counsel for the prisoner submitted to the Court that there was no case to go to the jury on three grounds: first, that there was no proof of any asportation of the articles alleged to have been stolen; secondly, that supposing the asportavit made out, the prisoner could not be convicted of this offence, unless it was manifest that he had a felonious intention of taking the clothes and converting them to his own use; and thirdly, that, at all events, there was no evidence upon which the jury could safely be called upon to act, so as to implicate him in the alleged offence. The counsel for the prosecution in answer urged, first, that the finding of the body naked, after proof that it had been interred in the clothes mentioned in the evidence, was sufficient proof of asportation; and that even stripping the body without removing the clothes out of the grave, was, in law, enough to support the indictment: secondly, that although the primary intention of the prisoner might be, to steal the body only, yet, if the clothes were taken, the law would construe them to have been feloniously taken; that it might as well be said that although a man's intention might be to steal a valuable jewel, yet it was no offence to take the casket in which it was contained: and thirdly, that whether the defendant was the party to whom guilt was imputed, was a question solely for the consideration of the jury. On the prisoner's counsel insisting that his objections had not been answered, the Chairman overruled the two first objections, and then summed up the evidence, on which the jury, after deliberating a few minutes, found the prisoner *Guilty*. The verdict, it is recorded,

was received by the auditory with a general expression of pleasure. The Court after animadverting in strong terms on the *abominable* offence of which the prisoner had been found guilty, said they were determined that he should not have an opportunity of pursuing his *odious* trade in this country, at least for some years, and *therefore* sentenced him to be transported for seven years. The account of this case is taken from the report of the trial contained in the Globe and Traveller newspaper of Jan. 20, 1824; a paper honorably distinguished for its endeavours to enlighten the public mind on this subject, not to foster its prejudices.

In this case there was no sufficient evidence to convict the prisoner of the alleged offence: even if that evidence had been perfectly satisfactory, the punishment inflicted was unjust: the circumstance essential to constitute the felony did not exist: the Chairman, with an ignorant and vulgar mind, stretched the law to gratify ignorant and vulgar prejudice: he relied upon the public feeling for protection in the illegal exertion of his power: he administered the law badly: he endeavoured to justify his conduct by loading the prisoner with odious epithets, and he did not miscalculate the feeling of his auditory; they witnessed the transaction "with a general feeling of pleasure." This case exhibits but too faithfully, the spirit often displayed both by the magistracy and the people.

Half a century ago there was in Scotland no difficulty in obtaining the subjects which were necessary to supply the schools of anatomy. The consequence was, that medicine and surgery suddenly assumed new life—started from the torpor in which they had been spell-bound—and made an immediate, and rapid, and brilliant progress. The new seminaries constantly sent into the world men of the most splendid abilities, at once demonstrating the excellence of the schools in which they were educated, and rendering them illustrious. Pupils flocked to them from all quarters of the globe, and they essentially contributed to that advancement of science which the present age has witnessed. In the 19th

century the good people of Scotland, that intelligent, that cool and calculating, that most reasonable and thinking people, have thought proper to return to the worst feeling and the worst conduct of the darkest periods of antiquity. There is at present no offence whatever which seems to have such power to heat, and to exalt into a kind of torrent, the blood which usually flows so calmly and sluggishly in the veins of a Scotchman. The people of 1823 (to compare great things with small) emulate the spirit of those of their forefathers who "*were out in the forty-five;*" the object, to be sure, is somewhat different, but it is amusing to see the intensity and seriousness of the excitement. About twelve months ago an honest farmer of the name of Scott, who resides at Linlithgow, apprehended a poor wight who was pursuing his vocation, we presume, in the churchyard of that place: and this service appeared so meritorious to the people in his neighbourhood, that they absolutely presented him with a piece of plate. In the winter sessions of 1822-3, a body was discovered on its way to the lecture-room of an anatomist in Glasgow, and, in spite of the exertions of the police, aided by those of the military, this gentleman's premises and their contents, which were valuable, were entirely destroyed by the mob. For some time after this achievement, it was necessary to station a military guard at the houses of all the medical professors in that city. In the justiciary court at Stirling, while the judges were proceeding to the court, the procession was assaulted with missiles; several persons were injured, and it was necessary to call in the protection of a military force. The object of the mob was, to inflict summary punishment on a man who was about to be tried for the exhumation of a body. We happen to know that the most disgraceful proceedings were some time ago instituted in that town against a young gentleman of respectable family and connections, who was in fact expatriated, and whose prospects in life were entirely changed, if not ruined, because he had too much honour to implicate his instructors in a transaction which would have put them to

inconvenience, and in which they had engaged from a desire faithfully to discharge their duty to their pupils. Within the last five years three men were lodged in the county gaol at Haddington, charged with a trespass in the churchyard of that town. So enraged was the mob against them, that an attempt was made to force the gaol in order to get at them. On their way to the court the men were again attacked, forced from the carriage, and severely maimed. After examination they were admitted to bail; but, when set at liberty, they were assailed with more violence than ever, and were nearly killed. On the 29th of June, 1823, being Sunday, a most extraordinary outrage was perpetrated in the streets of Edinburgh. A coach containing an empty coffin and two men, was observed proceeding along the south bridge. The people suspecting that it was intended to convey a body taken from some churchyard, seized the coach. It was with difficulty that the police protected the men from the assaults of the populace: the coach they had no power to preserve. The horses were taken from it, and together with the coffin, after having been trundled a mile and a half through the streets of the city, it was deliberately projected over the steep side of the mound, and smashed into a thousand pieces. The people, following it to the bottom, kindled a fire with its fragments, and surrounded it like the savages in Robinson Crusoe, till it was entirely consumed. In this case there was no foundation for their suspicions. The coffin was intended to have conveyed to his house in Edinburgh the body of a physician who that morning had died in a cottage in the neighbourhood. A similar assault was some time ago made on two American gentlemen, who went to visit the Abbey of Linlithgow after nightfall. The churchyards of the "gude Scots" are now strictly guarded by men and dogs; watch-towers are erected within the grounds, and *mort-safes* as they are called, that is to say, strong iron frames are deposited in the ground over the graves. These people sometimes declare that they will put an end to anatomy, and certainly they are succeeding in the accomplishment of this

menace as rapidly as they can well desire. The average number of medical students in Edinburgh is 700 each session. For several years past the difficulty of procuring subjects in that place has been so great, that out of all that number, not more than 150 or 200 have ever attempted to dissect; and even these have latterly been so opposed in their endeavours to prosecute their studies that many of them have left the place in disgust. We have been informed by a friend, that he alone was personally acquainted with twenty individuals who retired from it at the beginning of the session, and who went to pursue their studies at Dublin, and we know that vast numbers followed their example at the end of the winter course. The medical School at Edinburgh, in fact, is now subsisting entirely on its past reputation; in the course of a few years it will certainly be at an end, unless the system be changed. Let those who have the prosperity of the university at heart, and who have the power to protect it, consider this before it is too late: they may be assured it is no idle prediction; for we give them notice that it is at this moment the universal opinion and the current language of every well-informed medical man in England.

An excellent system of anatomical plates, which has been well received by the profession, has lately been published by Mr. Lizars, a lecturer on anatomy and physiology, in Edinburgh. This gentleman states that he has been induced to undertake the work, in order to obviate the most fatal consequences to the public; as far, at least, as a reference to art, instead of nature, is capable of obviating those consequences. He affirms, that the difficulty of obtaining instruction from nature has risen to such a pitch, owing to the extraordinary severity exercised by the legal authorities of the kingdom against persons employed in procuring subjects for dissection, as to threaten the ultimate destruction of medical and anatomical science. In his preface to the Second Part of his work, he apologises to his readers for dividing one portion of it from another, with which it ought to have been connected; but states that he has been compelled to do so from the pre-

judices of the place, which prevented him for upwards of five months, from procuring a subject from which he might make his drawings. "In place of living," he says, "in a civilized and enlightened period, we appear as if we had been thrown back some centuries into the dark ages of ignorance, bigotry, and superstition. Prejudices, worthy only of the multitude, have been conjured up and appealed to, in order to call forth popular indignation against those whose business it is to exhibit demostratively the structure of the human body, and the functions of its different organs. The public journals, from a vicious propensity to pander to the vulgar appetite for excitement, have raked up and industriously circulated stories of the exhumation of dead bodies, tending to exasperate and inflame the passions of the mob; and persons, who, by their own showing, are friendly to the interests of science, have, in the excess of their zeal that bodies should remain undisturbed in their progress to decomposition, laboured to destroy in this country, that art, whose province it is, to free living bodies from the consequences inseparable from accident and disease. And, which is worst of all, the prejudices of the multitude have been confirmed and rendered inveterate by the proceedings in our courts of justice, which have visited with the punishment due only to felons, the unhappy persons necessarily employed, in the present state of the law, in procuring subjects for the dissecting room."

He then goes on to state that, until anatomy be publicly sanctioned in Edinburgh, the school of medicine there can never flourish; that, upon the present system, young men obtain a degree or a diploma after a year or two of grinding, that is, of learning by rote the answers to the questions which the examiners are in the habit of putting to the candidates; that, ignorant of the very elements of their profession, numbers of persons thus educated, annually go to the East and West Indies, and to the army and navy, where they have the charge of hundreds of their suffering fellow-creatures, to whom they are in fact the instruments of cruelty and murder. In the preface to the Fourth Part, he adds, that when Part II. was

published, in the early part of the session, he took occasion to express his sorrow for the degraded state of his profession, and the threatened ruin of the Medical School of his native place, owing to the scarcity of subjects: that, for doing this, he has incurred considerable censure; that he regrets that he has yet found no reason to alter his opinion, for the winter session is now near its conclusion, and, he candidly declares, that such has been the scarcity of material, that *no teacher of anatomy or surgery has been able either to follow the regular plan of his course, or to do his duty to his pupils;* the consequence of which has been, that many of the students have left the school in disgust, and gone either to Dublin or Paris; while a still greater number, deprived of the means of dissecting, have contented themselves with lectures or theories, and with grinding; and entered on the practice of their profession ignorant of its fundamental principles.

Much of this opposition on the part of the people arises from the present mode of procuring subjects. Fortunately, there is in Great Britain no custom, no superstition, no law, and we may add, no prejudice against anatomy itself. There is even a general conviction of its necessity; there may be a feeling that it is a repulsive employment, but it is commonly acknowledged that it must not be neglected. The opposition which is made, is made, not against anatomy, but against the practice of exhumation: and this is a practice which ought to be opposed. It is in the highest degree revolting; it would be disgraceful to a horde of savages; every feeling of the human heart rises up against it: so long as no other means of procuring bodies for dissection are provided, it must be tolerated; but, in itself, it is alike odious to the ignorant and the enlightened, to the most uncultivated and the most refined.

But the capital objection to this practice is, that it necessarily creates a crime, and educates a race of criminals. Exhumation is forbidden by the law. It is, indeed, prohibited by no statute, either in England or in Scotland: in both it is an offence punishable at common law. There is a statute of James the First, which makes it felony to steal a dead body

for the purpose of witchcraft; there is none against taking a body for the purpose of dissection. In the case of the King against Lynn (1788), the Court decided that the body being taken for the latter purpose, did not make it less an indictable offence; and that it is without doubt cognizable in a criminal court, because it is an act "highly indecent; at the bare idea of which nature revolts." It is punishable, therefore, by fine or imprisonment, or both: in Scotland it is also punishable by whipping, and even by transportation.

In Great Britain the law against the practice of exhumation is not allowed to slumber. There may be other cases which have not come to our knowledge; but we have ascertained that there have been fourteen convictions for England alone during the last year. The punishments inflicted have been imprisonment for various periods, with fines of different sums. The fines in general are heavy, considering the poverty of the offenders. Several persons are, at this moment, suffering these penalties; among others, there is now in the gaol of St. Alban's, a man who was sentenced for this offence to two years' imprisonment and a fine of £20. The period of his confinement has expired some time; but he still remains in prison, on account of his inability to pay the fine. Since the passing of the new Vagrant Act, it has been the common practice to commit these offenders to hard labour for various periods. Very lately, two men, convicted of this offence, were sent to the Tread-Mill, in Cold Bath Fields; one of whom died in one month after his commitment. It is an error to suppose that these punishments operate to prevent exhumation: their only effect is to raise the price of subjects: a little reflection will show that they can have no other operation. At present, exhumation is the only method by which subjects for dissection can be procured; but subjects for this purpose must be procured; and be the difficulties what they may, will be procured: diseases will occur, operations must be performed, medical men must be educated, anatomy must be studied, dissections must go on. Unless some other means for affording a supply be adopted; whatever be the law or the popular feel-

ing, neither magistrates, nor judges, nor juries, will, or can put an entire stop to the practice. It is one which, from the absolute necessity of the case, must be allowed. What is the consequence? So long as the practice of exhumation continues, a race of men must be trained up to violate the law. These men must go out in company for the purpose of nightly plunder, and plunder of the most odious kind, tending in a peculiar and most alarming measure to brutify the mind, and to eradicate every feeling and sentiment worthy of a man. This employment becomes a school in which men are trained for the commission of the most daring and inhuman crimes. Its operation is similar, but much worse than the nightly banding to violate the game laws, because there is something in the violation of the grave, which tends still more to degrade the character and to harden the heart. This offence is connived at, nay, it is rewarded; these men are absolutely paid to violate the law; and paid by men of reputation and influence in society. The transition is but too easy to the commission of other offences in the hope of similar connivance, if not of similar reward.

It is an odious thing that the teachers of anatomy should be brought into contact with such men: that they should be obliged to employ them, and that they should even be in their power, which they are to such a degree that they are obliged to bear with the wantonness of their tyranny and insult. All the clamour against these men, all the punishment inflicted on them, only operate to raise the premium on the repetition of their offence. This premium the teachers of anatomy are obliged to pay, which these men perfectly understand, who do not at all dislike the opposition which is made to their vocation. It gives them no unreasonable pretext for exorbitancy in their demands. In general they are men of infamous character; some of them are thieves, others are the companions and abettors of thieves; almost all of them are extremely destitute. When apprehended for the offence in question, the teachers of anatomy are obliged to pay the expenses of the trial, and to support their families while they are in prison;

whence the idea of immunity is associated, in these men's minds, with the violation of the law; and when they do happen to incur its penalties, they practically find that they and their families are provided for, and this provision comes to them in the shape of a reward for the commission of their offence. The operation of such a system on the minds of the individuals themselves is exceedingly pernicious, and is not a little dangerous to the community.

Moreover, by the method of exhumation, the supply after all is scanty; it is never adequate to the wants of the schools; it is of necessity precarious, and it sometimes fails altogether for several months. But it is of the utmost importance that it should be abundant, regular, and cheap. The number of young men who come annually to London for the purpose of studying medicine and surgery, may be about a thousand. Their expenses are necessarily very considerable while in town; they have already paid a large sum for their apprenticeship in the country; the circumstances of country practitioners, in general, can but ill afford protracted expenses for their sons in London; few of them stay a month longer than the time prescribed by the College of Surgeons. But the short period they spend in London is the only time they have for acquiring the knowledge of their profession. If they misspend these precious hours, or if the means of employing them properly be denied them, they must necessarily remain ignorant for life. After they leave London they have no means of dissecting. We have seen that it is by dissecting alone, that they can make themselves acquainted even with the principles of their art; that without it they cannot so much as avail themselves of the opportunities of improvement, which experience itself may offer, nor, without the highest temerity, perform a single operation. We have seen that occasions suddenly occur, which require the prompt performance of important and difficult operations; we have seen that, unless such operations are performed immediately, and with the utmost skill, life is inevitably lost. In many such cases there is no time to send for other assistance. If a country practitioner (and most of these young men go to the

country) be not himself capable of doing what is proper to be done, the death of the patient is certain. We put it to the reader to imagine what the feelings of an ingenuous young man must be, who is aware of what he ought to do, but who is conscious that his knowledge is not sufficient to authorise him to attempt to perform it, and who sees his patient die before him, when he knows that he might be saved, and that it would have been in his own power to save him, had he been properly educated. We put it to the reader to conceive what his own sensations would be, were an ignorant surgeon, with a rashness more fatal than the criminal modesty of the former, to undertake an important operation. Suppose it were a tumour, which turned out to be an aneurism; suppose it were a hernia, in operating on which the epigastric artery were divided, or the intestine itself wounded; suppose it were his mother, his wife, his sister, his child, whom he thus saw perish before his eyes, what would the reader then think of the prejudice which withholds from the surgeon that information without which the practice of his profession is murder?

The study of anatomy is a severe and laborious study; the practice of dissection is on many accounts highly repulsive: it is even not without danger to life itself.* To men of clear understandings, to those especially of a philosophical turn of mind, the pursuit is its own reward; they are so fully satisfied that the more it is cultivated the more satisfaction it will afford, that they need no stimulus to induce them to undergo the drudgery. But this is by no means the case with ordinary minds. The fatigue and disgust of the dissecting-room are appalling to them, and they need the stimulus of necessity to urge them to the task. Instead of throwing obstacles in the way of dissection, it is a duty which the public owe to themselves to afford every possible facility to its practice, and to hold out to every member of the profession the most powerful inducements to engage in it, by rewarding with confidence those who cultivate anatomy, by making excellence in ana-

* A winter never passes without proving fatal to several students who die from injuries received in dissection.

tomy indispensable to all offices in dispensaries and hospitals, and by thus rendering it impossible for any one who is ignorant of anatomy, to obtain rank in his profession. When a candidate presents himself for a diploma in Denmark, in his first trial he is put into a room with a subject, a case of instruments, and a memorandum, and informed that he is to display the anatomy of the face and neck, or that of the upper extremity or that of the lower extremity: that by the anatomy is to be understood, the blood-vessels, nerves, and muscles; and that as soon as he has accomplished his task, the professors will attend his summons to judge of his attainments. These professors are the true examiners!

We shall have entered into the discussion of this subject to little purpose, if we have not produced in the minds of our readers a deep conviction, that anatomy ought to form an essential part of medical education; that anatomy cannot be studied without the practice of dissection; that dissection cannot be practised without a supply of subjects, and that the manner in which that supply is obtained in England is detestable and ought immediately to be changed.

What we would beg leave to suggest as likely to remedy the evils of the existing system, or at least as worth the experiment, is an Act of Parliament embodying the following provisions:

1. That if any person leave his own body for dissection, it shall be lawful for his executors to carry that part of his will into execution.

2. That it shall be lawful to appropriate to dissection the bodies of all persons who are buried at the public expense.

3. That the dissection of all such bodies shall be completed within a specified time, say three weeks; at the end of which period, the remains shall be buried with funereal rites.

4. That no stranger, no person who dies suddenly, shall be appropriated to dissection, at least within a certain number of days.

5. Other exceptions to be here inserted, which justice, prudence, or the general feeling may require.

All the medical schools on the continent are supplied with subjects by public authority. The following account of the mode in which those of Paris in particular are supplied, has been obtained from the gentleman who is at the head of the anatomical department in that city. It is stated, 1. That the faculty of medicine at Paris is authorised to take from the civil hospitals, from the prisons, and from depôts of mendicity, the bodies which are necessary for teaching anatomy. 2. That a gratuity of eight pence is given to the attendants in the hospitals for each body. 3. That upon the foundation by the National Convention, of schools of health, the statutes of their foundation declare, that the subjects necessary for the schools of anatomy shall be taken from the hospitals; and that since this period, the council of hospitals, and the prefect of police, have always permitted the practice. 4. That M. Breschet, chief of the anatomical department of the faculty of Paris, sends a carriage daily to the different hospitals, which brings back the necessary number of bodies: that this number has sometimes amounted to 2,000 per annum, for the faculty only, without reckoning those used in L'Hôpital de la Pitié, but that since the general attention which has recently been bestowed upon pathologic anatomy, numbers of bodies are opened in the civil and military hospitals, and that the faculty seldom obtain more than 1,000 or 1,200. 5. That, besides the dissections by the faculty of medicine, and those pursued in L'Hôpital de la Pitié, theatres of anatomy are opened in all the great hospitals, for the pupils of those establishments: that in these institutions anatomy is carefully taught, and that pupils have all the facilities for dissection that can be desired. 6. That the price of a body varies from four shillings to eight shillings and sixpence. 7. That after dissection, the bodies are wrapt in cloths, and carried to the neighbouring cemetery, where they are received for ten pence. 8. That the practice of exhumation is abolished: that there are insurmountable obstacles to the return to that system, and that bodies are never taken from burial-grounds, without an order for exhu-

mation, which is given only when the tribunals require it for the purpose of medico-legal investigations. 9. That though the people have an aversion to the operations of dissection, yet they never make any opposition to them, provided respect be paid to the laws of decency and salubrity, on account of the deep conviction that prevails of their utility. 10. That the relatives of the deceased seldom or never oppose the opening of any body, if the physicians desire it. That all the medical students in France, with scarcely any exception, dissect, and that that physician or surgeon who is not acquainted with anatomy, is universally regarded as the most ignorant of men.

To the other parts of the plan proposed above, for supplying the anatomical schools in Great Britain, there appears to be no objections whatever. No one can object to such a disposal of the bodies of those who die in prisons; no one can reasonably object to such a disposal of the bodies of those who die in poor-houses. These persons are pensioners upon the public bounty: they owe the public a debt: they have been supported by the public during life; if, therefore, after death they can be made useful to the public, it is a prejudice, not a reason,—it is an act of injustice, not the observance of a duty, which would prevent them from becoming so. It is true that many of these persons are honest and respectable; and have been reduced to indigence by misfortune: were they all so it would not alter the state of the argument. Some concession and co-operation on the part of the public, for this great public object, is indispensable, without which nothing can be done: but if any concession be made, it can be made with respect to this class of persons better than any other, because it can be made with less violation of public feeling. Nor is any indignity either intended or offered to these persons. They are appropriated to this service not because they are poor, but because they are friendless; because, that is, no persons survive them who take such an interest in their fate as to be rendered unhappy by this disposal of their remains. That they are without friends is no good reason why their memory should be treated with indignity; but it is a good reason, it is

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RAPPORT

SUR LE

TRAITEMENT DU CRÉTINISME.

DANS

L'ÉTABLISSEMENT DE L'ABENDBERG

(CANTON DE BERNE.)

Extrait des lettres publiées par le Docteur Guggenbühl,
à Zurich. 1846.

TIRÉ DES ARCHIVES DES SCIENCES PHYSIQUES ET NATURELLES.

GENÈVE,
IMPRIMERIE DE FERDINAND RAMBOZ,
Rue de l'Hôtel-de-Ville, 78.

1848

Le zélé fondateur de l'Asile des enfants crétins sur l'Abendberg, dans le Canton de Berne, le docteur Guggenbühl, a publié en 1846, sous le titre de : *Briefe über den Abendberg und die Heilanstalt für Cretinismus*, un second rapport sur cet établissement philanthropique, que nous recommandons particulièrement aux personnes qui ont à cœur le perfectionnement de l'humanité, et dont nous nous faisons d'autant plus volontiers un devoir d'exposer le contenu, que nous sommes convaincus de la pureté des principes de l'auteur et de la véracité de ses assertions.

Ce rapport, il est vrai, ne contient pas de tableaux statistiques détaillés, tels qu'on pourrait désirer en trouver dans un travail de ce genre ; mais ce qu'il dit suffit pour

justifier les succès positifs déjà obtenus, et les espérances probables pour l'avenir.

Le docteur Guggenbühl n'est point, en effet, un de ces froids calculateurs qui ne considèrent l'homme que comme une machine, et les malades soumis à ses soins que comme de simples sujets d'expériences médicales. Son but est plus relevé, sa mission plus noble et plus morale. Il remonte aux éléments spirituels et corporels de l'être humain, il examine les rapports, les liens intimes qui existent entre ces éléments, et signale l'influence désastreuse qu'exercent sur le développement normal de l'âme les altérations de l'enveloppe matérielle. Il prouve ainsi victorieusement que l'éducation intellectuelle, morale et religieuse, ne saurait être isolée de l'éducation physique.

Ces principes, appliqués à l'éducation des crétins et des idiots, lui offrent un vaste champ d'études qu'il exploite avec bonheur et intelligence.

Chrétien dévoué au perfectionnement de ses semblables, il voudrait faire passer sa conviction religieuse dans l'esprit de ses lecteurs, et la préface de son rapport nous donne la mesure de ses intentions charitables.

« Sans nul doute, dit-il, la sollicitude en faveur des crétins, pauvres créatures exposées au danger de tomber dans un abrutissement physique et moral, appartient aux intérêts les plus sacrés de l'humanité, elle sera ressentie par tous ceux qui aiment Dieu. » Et, ailleurs, dans une citation : « Améliorer le sort déplorable de ces êtres malheureux, et, avec l'assistance de Dieu, les former et les cultiver jusqu'à ce qu'ils deviennent des hommes utiles, ce n'est autre chose qu'accomplir une résurrection intellectuelle ; c'est dans notre époque le plus grand mira-

cle de la charité chrétienne, et une des plus nobles œuvres missionnaires entreprises pour servir le royaume de Dieu. Que celui-là ne se glorifie pas de son christianisme, qui ne se sent pas pressé de faire pour cette cause tout son possible, car il est un homme sans cœur, et son âme est la proie d'un crétinisme bien plus dangereux, que celui qui attaque la nature physique et morale de pauvres enfants. »

Pour prouver l'importance du but qu'il se propose, le docteur Guggenbühl cherche à établir, par des faits et des citations, quelle extension énorme a pris le crétinisme dans certaines contrées. En voici un exemple : « En Autriche, le crétinisme s'est si bien établi le long du Danube que, » d'après les observations du docteur Schausberger, médecin à Steyer [1], « il se trouve des paroisses vastes et populeuses, où, dans le recrutement annuel, on ne peut trouver un seul homme capable de porter les armes. A Gros-Pechlarn et dans les villages environnants de Pechlarn et de Brunn, on ne trouve aucune famille où l'on ne rencontre au moins un de ces malheureux, mais en revanche il y a beaucoup de familles qui ne sont composées que de crétins et de demi-crétins. »

Au reste, l'appel fait à l'Europe par le docteur Guggenbühl n'a point été infructueux, et ce qui le prouve, c'est la liste nombreuse des auteurs modernes qui se sont occupés dès lors du crétinisme, et que nous croyons devoir transcrire ici pour favoriser les recherches qu'on serait tenté d'entreprendre.

[1] Beobachtungen und Bemerkungen über den an beiden Ufern der Donau in Ober und Unter-Oesterreich häufig vorkommenden Cretinismus. Oester. med. Wochenschrifft, 1842, n° 44.

Doctor Demme. *Ueber endemischen Cretinismus. Eigenthum der Rettungsanstalt für Cretinen auf dem Abendberg.* Bern, bei Fischer, 1840, in-8°.

Doctor Buek. *Vortrag über Cretinismus und die Möglichkeit demselben vorzubeugen.* Gehalten in der Versammlung deutscher Naturforscher und Aerzte zu Braunschweig, 1842. Hamburg, bei Nestler und Hemme, in-8°.

Doctor Otho Thieme. *Der Cretinismus.* Eine Monographie. Weimar, 1842, in-8°.

Doctor Roesch. *Die Stiftung für Cretinen Kinder auf dem Abendberg bei Interlaken, K. Bern.* Stuttgard, bei Ebner und Seubert, 1842, in-8°.

Doctor A.-W.-F. Herckenrath. *Het Gesticht voor behoftige Cretinen Kinder, opergit door Doct. Guggenbühl op ten Abendberg bij Interlaken, in Switzerland.* Amsterdam, ten Brienks et Vries, 1842.

Docteur Berchtold-Beaupré. *Dissertation sur le Crétinisme.* Fribourg, 1843, in-8°.

Doctor Twining. *Some account of Cretinism and the institution for its cure on the Abendberg in Switzerland.* London, J.-W. Parker, West Strand, 1843.

Extracts from the first Report of the Institution on the Abendberg for the cure of Cretins. Translated by Doctor W. Twining. London, Harrison and C°, 1843, in-8°.

Doctor Maffei und Doctor Roesch. *Neue Untersuchungen über Cretinismus.* 2 Bde. Erlangen, bei Enke, 1844, in-8°.

E.-H. Michaelis. *Skizzen von der Verbreitung des Cretinismus im Kant. Aargau.* Aarau, 1843, in-4°.

Doctor Eward Wells. *Essay upon Cretinism and goitre.* London, Churchill, 1845, in-8°.

D.-A. Chavannes. *Des Crétins à l'Abendberg.* Journal

de la Société vaudoise d'utilité publique, n° 145. Lausanne, 1844, in-8°.

Verhandlungen der schweiz. naturforschenden Gesellschaft, über Cretinismus, zu Freyburg, Zurich, Lausanne, Chur und Genf. 1840—45.

Doctor Michael Viszanik. *Die Irrenheil-und Pfleganstalten Deutschlands, Frankreichs, sammt der Cretinen-Anstalt auf dem Abendberge in der Schweiz, mit eigenen Bemerkungen herausgegeben.* Wien, 1845, in-8°.

L'auteur passe ensuite aux moyens qu'il croit devoir proposer pour combattre le crétinisme et l'idiotisme.

Il pose d'abord en principe, comme étant sa conviction, que la sagesse du Créateur départit à chaque créature humaine une âme immortelle. Il admet, avec Schubert, que cette âme est nourrie et entretenue par un élément spécial, indépendant du corps, de même que le germe dans le fruit est formé et nourri par un filet de sève indépendant de ce fruit, et provenant de la moelle du végétal. L'âme est donc tout à fait identique, quelle que soit la perfection ou l'imperfection de son enveloppe matérielle, à moins qu'il n'y ait désorganisation complète du cerveau; de même qu'un corps humain peut être parfaitement développé et plein de vie sous un vêtement qui ne gêne pas ses membres, tout aussi bien que sous un vaste linceul qui en empêche le libre exercice. Mais, dans les deux cas, les manifestations du principe immatériel sont bien différentes; car si le corps reste imparfait, les manifestations de l'âme seront également toujours imparfaites, tandis que le développement plus ou moins normal de l'âme pourra avoir lieu, si elle est associée à un corps dont le développement est plus ou moins parfait ou perfectible.

En outre, on doit reconnaître que c'est dans le cerveau et la moelle épinière qu'est le point de départ du principe vital, qui préside à la formation et à l'entretien des organes : si donc le cerveau et la moelle épinière sont malades, le corps en est éprouvé nécessairement, il s'affaisse, devient maigre, rabougri, et les sensations qui le relient au monde extérieur s'émoussent.

Et, si l'on remonte à l'origine de ces symptômes morbides, on est forcé d'en placer la cause principale dans une alimentation fautive en plus ou moins, dont l'agent primitif nous est inconnu.

Enfin, ces altérations doivent être considérées chez les crétins, comme le produit d'une nutrition maladive de la première enfance. Abandonnées à elles-mêmes, elles empirent d'année en année, jusqu'au point où la dignité de l'homme est entièrement dégradée.

Telles sont les idées théorétiques sur lesquelles s'appuie le docteur Guggenbühl, et qu'il trouve confirmées par sa pratique.

Les crétins ont, en effet, une âme perfectible comme les autres hommes ; mais leur organisation matérielle étant toujours plus ou moins altérée, leur âme ne peut ni se développer, ni manifester ses facultés, à moins d'un changement favorable dans ces conditions.

Le problème qu'on doit se proposer dans le traitement du crétinisme consiste donc à rétablir l'équilibre, d'un côté en combattant les altérations du corps, et de l'autre en favorisant, par une éducation intellectuelle et morale judicieuse, le développement de l'âme.

Or, pour parvenir à la solution de ce problème, il faut d'abord rechercher et éliminer les causes des altérations matérielles.

Au nombre des plus puissantes de ces causes, sont les circonstances locales ou endémiques, dont le doct. Fodéré a fourni un aperçu, en traçant un tableau de la Maurienne et de la vallée d'Aoste.

« Ici la rivière de l'Arc coule plus lentement, là les montagnes s'élevant en amphithéâtre sont couvertes de vignobles et de vergers, les habitations se cachent sous des bois d'arbres fruitiers. La température est chaude, parce que les rochers réfléchissent les rayons du soleil, et que la chaleur y reste concentrée du matin jusqu'au soir. Le sol en est fertile. La présence des marécages et l'évaporation de la rivière rendent l'atmosphère humide, et en été il y règne une chaleur humide. Les vents ne peuvent balayer la vallée à cause de ses nombreuses courbures; aussi les nuages s'y accumulent et restent adhérents au feuillage épais des arbres, ils s'élèvent lentement, de sorte qu'après un jour de pluie, tandis que le sommet des montagnes est éclairé du soleil, le fond de la vallée est encore menacé du mauvais temps. »

Dans la vallée d'Aoste, qui est très-chaude, des essais hygrométriques avaient également prouvé à Fodéré, que les lieux où l'atmosphère était le plus humide contenaient le plus de crétins et vice versâ.

Or, ces influences endémiques sont celles qui favorisent la prédominance maladive du système lymphatique, ce que l'on nomme *la diathèse scrofuleuse*, et qui est caractérisée par la combinaison imparfaite des principes constituants du sang, par la faiblesse générale des muscles ou d'autres organes, et en particulier du système nerveux, par des engorgements glandulaires, par la tuméfaction du ventre, par des éruptions, des ulcères de la peau, des inflammations et des suppurations internes, des oph-

thalmies, le ramollissement et la courbure des os, etc.

D'autre part, il était démontré par l'expérience, qu'en plaçant des enfants crétins dans des conditions opposées, c'est-à-dire, en leur faisant respirer un air *plus sec, plus pur, plus frais, plus propre à fortifier, à régulariser la nutrition*, tel qu'on le trouve sur *la croupe des montagnes*, on parvenait à arrêter le développement du crétinisme. Ainsi agissaient les habitants de Sion, qui tous les étés transportaient le domicile de leur jeune famille dans des chalets élevés, et qui virent diminuer le crétinisme dans la capitale du Valais. Ainsi, le docteur Schausberger cite des exemples de parents jouissant d'une bonne santé, qui vinrent s'établir à Pechlarn, auprès du Danube, où ils n'eurent que des enfants crétins, tandis que des parents demi-crétins, nés dans ces malheureux villages, s'étant établis plus tard sur la montagne, eurent des enfants bien constitués.

Le docteur Claivac, de Martigny, avait aussi remarqué dans sa pratique en Valais, que le seul véritable moyen de sauver un enfant tombant dans le crétinisme, consistait à lui faire prendre des bains, à pratiquer des frictions sur la moelle épinière, à lui faire faire de l'exercice dans un air pur, en un mot à employer tous les moyens propres à combattre les scrofules.

Partant de ces faits, et d'autres non moins frappants que nous passerons sous silence [1], le docteur Guggenbühl

[1] L'importance du sujet nous engage néanmoins à faire une exception en faveur d'une enquête ouverte en 1844 à Syrnitz, près de Klagenfurth, en Autriche, et dont voici un extrait inséré page 32 du rapport. « Joseph Willeger dépose : Mon père, dans les premières années après l'acquisition de notre domaine, il y a environ trente ans, a fait l'observation que les domestiques étrangers qui

entrevoit dans le vice scrofuleux la cause déterminante de tous ces maux, et en particulier du crétinisme, et dans son rapport il s'attache à en démontrer la liaison, ainsi que l'influence sur la génération des enfants crétins.

arrivaient dans le pays pour habiter sa ferme, prenaient bientôt de très-gros cols, et, de temps à autre, à mesure qu'ils y séjournaient plus longtemps, ils devenaient plus goîtreux, et respiraient avec plus de difficulté.

« En même temps les genoux se tuméfiaient, les pieds devenaient le siége de douleurs lancinantes, s'enraidissaient et s'affaiblissaient. Si leur séjour se prolongeait, ils éprouvaient une indisposition rhumatique générale, qui se faisait surtout sentir dans les mauvais temps. A mesure que cet état de faiblesse et de raideur augmentait, l'intelligence s'affaissait aussi, et à la suite des temps, après des années, cette intelligence s'altérait au point de passer au crétinisme.

« Les gens nés dans la métairie sont atteints de cette infirmité à un degré plus fort. A l'époque de son achat elle était occupée par une famille de crétins, dont quatre enfants et un oncle demi-crétin. Le défunt, père des quatre enfants, avait été également demi-crétin, ce qui n'avait pas empêché les deux frères de parvenir l'un à l'âge de 105 ans, et l'autre à 100 ans. On remarque la même dégénérescence dans le bétail, surtout dans le bétail à cornes, au point qu'on ne pouvait élever de jeune bétail sans remarquer des vices de croissance et des maladies intestinales, et qu'il fallait importer de l'étranger les bêtes de trait.

« Dans le domaine de la seigneurie d'Albeck, on a fait les mêmes observations, et on est remonté aux mêmes causes. Le propriétaire actuel, ci-devant militaire, après avoir fait l'achat de ce bien, y arriva ainsi que sa première femme, frais et bien portant. Celle-ci y est morte goîtreuse et à demi crétine, et le propriétaire avec sa seconde femme ont aussi passé au demi-crétinisme. Les cinq enfants du premier lit, sont tout à fait hébétés, leur col est épais et leur corps et raide. Les enfants du second lit, l'un âgé de trois ans, l'autre d'un an, sont, il est vrai, encore en bonne santé, mais doivent s'attendre au même sort que leurs frères aînés, car ces derniers aussi étaient bien portants dans le bas âge. Il faut en outre remarquer, qu'à la raideur des pieds, à la torpeur générale du corps, à l'hébêtement des facultés intellectuelles se joignent aussi des vices de l'ouïe et de la parole, qui s'aggravent avec

C'est aussi en conformité de cette expérience non contestable et de ce point de vue théorétique, qu'il a fondé sur l'Abendberg l'institut des jeunes crétins, et qu'il en dirige le traitement médical et prophylactique.

Les altérations matérielles extérieures, qui caractérisent le *crétinisme*, permettent à l'auteur du rapport d'établir le diagnostic de cette maladie d'avec l'*idiotisme*.

Suivant lui, l'idiotisme, qui n'a son siége que dans le cerveau, peut s'allier à une conformation du corps plus ou moins régulière, et dans ce cas, moins les accidents matériels se manifestent extérieurement, plus la maladie du principe intelligent est grave, plus le traitement est difficile. Il est même des circonstances où tout moyen d'arriver à un perfectionnement moral est détruit, et où l'âme paraît comme éteinte dans son apparition sur la terre. Les idiots entendent mais ne comprennent pas, ils voient mais ils n'aperçoivent pas, ils n'ont aucune idée et n'exercent point leur pensée. L'idiotisme est congénial dans l'atrophie du cerveau, mais ordinairement il n'est que la conséquence de l'irritabilité du cerveau, ou du crétinisme. Il n'est pas rare aussi de voir l'idiotisme succéder à une enfance très-intelligente, mais surexcitée, ce qui prédispose à un état maladif du cerveau.

Dans le crétinisme, au contraire, malgré l'état maladif du corps, il n'y a que faiblesse du cerveau ; il n'existe

l'âge, et qu'il est d'observation que des enfants, venus au monde et sevrés frais et bien portants, ne commencent à éprouver les débuts de cette maladie que dans les dernières années de l'enfance, qu'à mesure qu'ils croissent leur état s'aggrave jusqu'à ce qu'ils deviennent tout à fait crétins. Le contraire arrive lorsque des individus atteints de ces infirmités changent d'habitation et boivent de l'autre eau. Ils éprouvent dans ces cas une amélioration sensible de leur état. »

qu'une perception obscure des objets, une association faible des idées, du vague dans les images que les sens réfléchissent au cerveau, une faiblesse dans le jugement et la compréhension, ce qui n'exclut pas une perfectibilité possible, puisqu'il n'y a qu'un défaut quantitatif. Les formes du crétinisme, où le mal se manifeste davantage par une conformation physique lourde et grossière, se lient à une grande lenteur de compréhension ou de jugement, et parfois se retrouvent chez des individus doués d'une admirable mémoire, d'une étonnante faculté de comparaison, qui saisissent très-bien le caractère des objets extérieurs, mais qui négligés peuvent facilement tomber dans des idées fixes, et passer à l'aliénation mentale.

Cette obscurité des images est le trait le plus caractéristique du crétinisme ; elle provient de ce que ces images ne peuvent stimuler suffisamment *les fibres du cerveau plongées dans un état de torpeur*, et que par conséquent elles se mêlent d'une manière confuse ; elle est aussi la cause des inégalités d'humeur qui distinguent les enfants crétins, enfin elle nous donne la clef du traitement intellectuel et moral qui leur est applicable.

Ce traitement consiste, à donner à la créature humaine la conscience des principes qui sont la base de ses facultés, et à favoriser ainsi le développement de l'intelligence. On commence par lui faire saisir la comparaison, les analogies et les dissemblances entre les objets, en procédant par degrés de grandeur, de couleur, de forme, de substances, de parties, etc., etc. Ensuite on résume ces jugements pris en détail, pour en composer une idée générale, et on fait découler certaines conséquences de ces idées générales.

Quand, par des efforts persévérants, on est parvenu à réveiller chez l'enfant le sentiment, que l'existence de la matière visible et bornée ne repose que dans l'idée de l'éternel et de l'infini, que le bon et le juste seuls plaisent à Dieu, tandis que le mal et l'injuste lui déplaisent, alors on voit sa *raison* se dévoiler et se manifester.

« Ce sentiment, » ajoute le docteur Guggenbühl, « parle très-haut chez un grand nombre d'enfants, au moment où se réveille l'âme, et depuis longtemps nous avons fait l'observation, qu'ils comprennent plus tôt l'existence de Dieu que l'existence d'un objet qui tombe sous leurs sens, d'une table, par exemple. Il en est de même du sentiment qu'ils éprouvent, que Dieu manifeste sa présence dans les phénomènes de la nature, si variés et si admirablement exposés à leur regard dans les environs de l'Abendberg. Il faut avoir été témoin de l'étonnement, de la joie, de l'admiration de ces enfants au lever et au coucher du soleil, à la vue de l'arc-en-ciel, au roulement du tonnerre, etc., etc., pour bien comprendre la vérité de ce qu'avance *Diesterweg*, lorsqu'il dit : « Plus d'un adulte doit être honteux de son indifférence et de sa torpeur morale, en présence des phénomènes de la nature, quand il se trouve à côté de l'enfant innocent, qui leur consacre avec ravissement une attention profonde et qui se sent pénétré de joie et d'admiration. »

La *mémoire* existe chez tous les crétins à un degré plus ou moins élevé. Ceux qui ont reçu quelque instruction retiennent parfaitement des versets, des maximes, des séries de nombre, des mélodies et des chansons. Témoin un enfant de onze ans, parvenu à un très-haut degré de crétinisme, et dont les organes de la voix sont sujets à des crampes qui lui rendent la prononciation très-

difficile. Il apprend par cœur des morceaux de poésie ou des sentences, et nous avons pu apprécier dans ces exercices la fidélité de sa mémoire.

Plusieurs crétins se distinguent par des *talents mécaniques*, les uns dessinent, d'autres construisent de merveilleux châteaux de cartes. L'exemple du crétin Mind, peintre fort connu à Berne par ses tableaux de chats, en est une preuve évidente. Il existe aussi, dans l'établissement de l'Abendberg, un garçon de douze ans, qui reproduit fidèlement des sujets simples, tels que des ustensiles et des animaux. Ces talents ne sont pas la conséquence d'un simple instinct naturel, mais ils annoncent l'existence d'idées qui se traduisent par ces formes visibles.

Dans les rêves, l'imagination des crétins est aussi très-active, ce qui montre que les facultés de leur esprit agissent harmoniquement.

La *sensibilité* joue, à des degrés divers, un rôle très-important dans la vie morale de ces enfants. On voit naître dans leur âme des affections, des désirs et des passions, d'où résultent des sentiments divers, tantôt gais et calmes, tantôt tristes et agités. Dans certains jours, il est des élèves qui ne font point de progrès, et qui par cela même donnent du découragement à ceux de leurs instituteurs qui ne se sentent pas une vocation intérieure pour cette œuvre. Mais il arrive aussi qu'un élan subit fait regagner le temps perdu, que le sentiment se réveille, et que le maître est récompensé par une affection caressante, qui témoigne de la reconnaissance inspirée.

La réflexion et le sentiment font naître le *désir*. L'enfant crétin dirige ses désirs et ses efforts vers le but que lui inspirent ses idées et ses sentiments. Plusieurs d'entre

eux éprouvent une forte antipathie contre les animaux, et sont attirés par les poupées, les fleurs et les substances qu'on peut manger. La plupart craignent de tomber, ne veulent pas marcher, quoique leurs forces soient suffisamment développées. Il s'agit de dompter leur sensualité, d'éloigner d'eux tout ce qui pourrait les entraîner à l'imitation ou à l'habitude de ce qui est mal, d'assurer à la volonté sa libre sphère d'activité, de réveiller le désir du perfectionnement, et d'aider l'élément moral dans sa lutte avec le penchant sensuel, afin de favoriser la victoire du premier de ces agents.

Après avoir ainsi exposé quelques-uns des principes qui doivent diriger l'éducation physique, intellectuelle et morale des enfants crétins, le docteur Guggenbühl ne néglige pas l'examen de la question de la préséance relative de l'une ou de l'autre de ces branches d'éducation.

Tout en se prononçant en faveur de l'opinion émise par Hufeland « que dans le jeune âge, jusqu'à sept ans, il faut faire prédominer presque entièrement l'éducation physique en plein air et d'une manière utile, afin de donner au corps l'activité qui lui est propre, de favoriser la distribution harmonique des forces et des fluides, et d'éviter les vices de croissance ou de développement ; » tout en reconnaissant, d'une part, que l'éducation intellectuelle trop hâtive, peut avoir une influence fâcheuse sur le caractère et le physique de l'individu, et de l'autre, que les lacunes que présentent certains enfants sous ce rapport, sont bientôt effacées par l'énergie que prend l'intelligence lorsqu'elle se développe en même temps que les forces du corps ; notre auteur est d'avis, que le conseil donné par Hufeland, quoique applicable à la généralité des enfants, ne l'est pas aux enfants crétins.

Il fait remarquer, que le crétinisme a pour caractère spécial une torpeur croissante des parties centrales du système nerveux, ce qui nécessite un traitement immédiat dès le bas âge, alors que ces organes sont encore susceptibles d'une gymnastique. Ce que l'on n'exécute pas ici de bonne heure est perdu, ou du moins on ne peut rattraper qu'imparfaitement ce que l'on a perdu. « Si donc, dit-il, il résulte de ce qui précède, que même chez ces enfants habite un principe intelligent semblable en qualité à celui des autres hommes, si leur âme renferme le germe et la disposition à un perfectionnement spirituel, on ne saurait trop insister sur ce fait incontestable (déjà signalé), à savoir, *que les progrès de la désorganisation physique ont pour conséquence un arrêt progressif du développement intellectuel, arrêt qui d'année en année devient de plus en plus funeste.* » Et il ajoute : « Quand un individu est attaqué de crétinisme, il est possible de lui faire recouvrer la plénitude de ses facultés intellectuelles, pourvu que le malade soit soumis sans délai à un traitement approprié à sa situation ; » or ce traitement, on le conçoit, doit être autant intellectuel que physique, mais il faut avant tout favoriser le développement du corps, et remédier aux symptômes maladifs matériels, car chez ces enfants l'âme ne peut se perfectionner dans un corps malade.

A la suite de ces généralités, le second rapport du docteur Guggenbühl contient un exposé succinct des principales formes sous lesquelles s'est présenté le crétinisme dans l'établissement de l'Abendberg, et l'historique abrégé de quelques malades qui y ont été reçus et traités.

I.

Dans la première forme, signalée sous le titre d'*atrophique*, la moelle épinière est surtout en souffrance; elle a pour tendance principale la paralysie et l'atrophie des extrémités, et par conséquent la suppression de la motilité.

L'auteur fournit comme exemple, celui d'une petite fille qui, entrée à l'âge de six mois dans l'établissement, avait présenté depuis le quatrième mois de sa naissance, un dépérissement de tout le corps, ainsi qu'un affaiblissement de la caloricité et surtout du système musculaire, avec trouble des fonctions digestives, une structure très-irrégulière de la tête, les traits de la vieillesse, etc., etc.

Dans l'espace de douze mois elle avait éprouvé une métamorphose complète et, dix-huit mois après sa sortie de l'établissement, elle avait acquis la faculté de se servir de la parole.

II.

La forme *rachitique*, comme sa dénomination l'indique, a pour caractère spécial le ramollissement et la déformation des os, indépendamment de la torpeur du système nerveux et musculaire, de l'engorgement des glandes lymphatiques, etc., etc.

Trois exemples sont fournis à l'appui :

Le premier est celui d'une petite fille née de parents sains, étrangers au Valais, mais qui s'étaient établis dans ce pays. Jusqu'à deux ans elle était fraîche et rose; alors elle commença à perdre l'usage de ses jambes, devint morose, taciturne et hébétée.

Entrée à l'âge de quatre ans dans l'établissement, plusieurs de ses os étaient ramollis, gonflés et déformés, les fonctions digestives et cutanées étaient troublées, la caloricité altérée et la faiblesse extrême. Sous l'influence des bains d'air, de l'électricité, de l'huile de morue, des bains aromatiques, des frictions et d'une diète animale, la petite malade pouvait au bout d'un an marcher et sauter, et un rajeunissement complet s'était opéré dans son physique et son moral. Deux ans se sont écoulés depuis sa sortie de l'établissement, et la jeune fille a pu entrer dans les écoles publiques.

Le second fait est celui d'une fille, née, d'un père atteint de mélancolie et qui bégaie, dans un pays disposé au crétinisme. Dès la première année, son développement physique fut enrayé par des accidents scrofuleux et rachitiques graves. Entrée à l'Abendberg vers l'âge de dix-huit mois, elle était à moitié paralytique, avec un front étroit, et privée de toute apparence d'intelligence, au point même de ne pas remarquer les objets extérieurs. Au bout de huit mois, elle commença à s'animer et à marcher, ses facultés intellectuelles et morales se développèrent en même temps que sa tête augmenta de volume. Après un séjour de quatre ans, elle est sortie de l'établissement en excellente disposition.

Le troisième sujet est encore une petite fille, née d'un père savoyard et d'une mère valaisanne, dont les frères sont atteints d'une disposition à l'idiotisme ; sa figure est trompeuse, car elle est fraîche et rose, et ses traits sont délicats et souriants. A l'âge de deux ans elle pouvait marcher et articuler des sons, mais à l'époque de la dentition, il survint un arrêt dans son développement physique et moral, et lorsqu'une année plus tard elle entra

dans l'établissement, elle ne pouvait se soutenir sur les jambes, les jointures étaient gonflées, les muscles languissants, la tête volumineuse et déformée, et on apercevait un rudiment de goître. L'amélioration de cette petite malade ne s'opéra pas insensiblement, mais brusquement et par sauts, après plusieurs mois d'attente, et l'intelligence ainsi que la parole reprirent leur essor. Une année après sa sortie de l'établissement, quoique habitant le Valais, on eut la jouissance de constater de nouveaux progrès.

III.

Forme *hydrocéphalique*. Elle est caractérisée par une tendance à une hydropisie de cerveau congéniale, avec affaiblissement des fonctions des sens, langueur des facultés morales et intellectuelles, ou divers symptômes de paralysie, et semble être un passage au crétinisme congénial. Un exemple de cette forme nous est offert dans une jeune fille née d'une mère délicate et nerveuse, et dont la tante a une tendance au rachitisme. Dès sa première enfance, cette pauvre malheureuse, dont la tête était déjà difforme, fut attaquée de crampes, de toux, de coqueluche, d'étouffements, plus tard il survint un état fébrile violent avec diminution progressive de la faculté de parler et de marcher, que divers remèdes ne purent enrayer.

Entrée à l'âge de quatre ans dans l'établissement, la disproportion du crâne avec le reste du corps, et même avec la face, était très-considérable, les fonctions des sens étaient en général actives, mais la faiblesse générale et en particulier celle des muscles était très-prononcée. Elle ne pouvait ni marcher, ni parler, ni même manger,

cependant elle comprenait plusieurs mots, et même de petites phrases. Les éléments du jugement, du sentiment et de la volonté existaient, mais étaient presque éteints, et son caractère était quinteux et triste. Le séjour dans l'air frais de la montagne, une diète animale, des bains aromatiques, des frictions, l'usage interne du iodure de fer, ont obtenu un succès qu'on aurait à peine osé espérer. L'équilibre tend à se rétablir entre les proportions du corps et de la tête, il y a un arrêt dans la croissance de cette dernière, tandis que l'accroissement du corps a lieu d'une manière régulière et progressive. La jeune malade commence à articuler des mots, à marcher, et son caractère quinteux et entêté fait place à des sentiments plus aimables et plus propres à faciliter le développement de son intelligence.

IV.

Crétinisme congénial.

Nous avons vu que, sous l'influence de causes endémiques (telluriques et atmosphériques) des générations entières et des populations nombreuses étaient décimées par le crétinisme. Le cachet de cette maladie endémique, lorsqu'elle est congéniale, est une disproportion frappante entre le tronc et les extrémités, résultat d'une nutrition irrégulière et maladive, et cette disproportion, cette dégénérescence matérielle, présente tous les degrés imaginables jusqu'à la déformation la plus entière des organes. Les mêmes degrés d'altération s'observent dans les facultés de l'âme, depuis la simple torpeur jusqu'à l'idiotisme le plus complet.

On a également fait observer que le seul moyen effi-

cace pour prévenir un pareil fléau, consistait dans l'élimination des causes prédisposantes et déterminantes. Mais quelque progrès que fasse la civilisation, il n'est pas toujours facile d'arriver de suite à ce but désirable. Que faire en attendant?

Il faut du moins affaiblir les tristes conséquences d'un pareil état de choses, en cherchant à y soustraire le plus possible de victimes, spécialement dans cette classe malheureuse de la population, dont les moyens pécuniaires sont insuffisants pour espérer qu'ils puissent changer promptement leur manière de vivre. C'est une œuvre digne d'occuper l'attention des gouvernements civilisateurs. La Suisse a, la première, donné le noble exemple de cette charité patriotique. L'établissement des crétins sur l'Abendberg, fondé à l'aide de modestes souscriptions, soutenu par la bienveillance des particuliers et des sociétés helvétiques des sciences naturelles et d'utilité publique, mais surtout par les efforts persévérants et éclairés de son directeur, est le premier qui paraît avoir résolu victorieusement le problème dont nous nous occupons.

Quelques faits, rapportés par le docteur Guggenbühl comme types des divers degrés de crétinisme congénial, en fournissent la preuve.

Au nombre des cas moins graves de crétinisme congénial, qui constituent le premier degré de torpeur, figure un jeune garçon qui est entré dans l'institut à l'âge de neuf ans. Né de parents sains, son grand'père maternel bégayait et son grand-oncle était tout à fait crétin; ses frères eurent tous des convulsions peu après leur naissance, l'un mourut d'hydrocéphale, et un second d'un ramollissement de l'estomac.

A son entrée, l'enfant éprouvait un affaiblissement général, ses genoux étaient chancelants et ployés en avant; il glissait en chancelant plutôt qu'il ne marchait; le système musculaire était atrophié; les bras très-longs et desséchés pendaient le long du corps émacié; la langue épaisse, gonflée en massue à son extrémité; les dents irrégulières, déformées et encroûtées, les lèvres tuméfiées et pendantes, la salivation continuelle, l'odeur de la bouche fétide, la mastication des aliments solides très-difficile; la cornée de l'œil droit obscurcie à la suite d'une ophthalmie scrofuleuse. La tête en pain de sucre, mais symétrique, le front fuyant, le derrière de la tête aplati, le menton avancé, la couleur de la face pâle et lymphatique. D'ailleurs l'enfant était assez grand pour son âge. Son intelligence allait de pair avec l'état du corps. Les idées qu'il pouvait avoir sur les choses les plus ordinaires étaient obscures et confuses, son langage consistait en un bégaiement indistinct et sans suite, de sons entrecoupés; il se faisait plutôt comprendre par gestes. L'activité des sens était assez normale. Le moral avait déjà pris une mauvaise direction, il était envieux, jaloux et emporté, mais en même temps (preuve que le sentiment du juste et de l'injuste est bien un des éléments de notre âme, et que la conscience veille toujours, ou du moins peut être toujours réveillée), il sentait ses torts dès qu'il avait égratigné ou frappé quelqu'un de ses camarades, il cherchait à l'apaiser, puis se cachait. Dans le cours de son éducation, les progrès du corps ont marché de pair avec ceux de l'âme. Ses forces ont augmenté au point qu'il saute avec plaisir, et s'adonne à la gymnastique. Toutes ses mauvaises habitudes ont disparu, il est devenu gentil, sociable et obéissant, et a pris un tel amour pour l'étude,

que chaque lettre, chaque mot dont il a fait la conquête, lui font pousser des cris de joie. La vue de sujets tirés de la nature ou des images qui la représentent, stimulent son apathie et sa mémoire ; il comprend lentement et difficilement, mais n'oublie jamais ce qu'il a compris. Peu à peu il est parvenu à lire et à écrire intelligiblement, et il a appris la valeur grammaticale d'un certain nombre de verbes, de substantifs et d'adjectifs. Son éducation religieuse a été conduite sur les mêmes principes, et ses sentiments religieux et moraux ont pris assez de développement.

Un second élève, né dans une localité favorable au crétinisme, de parents goîtreux et d'une intelligence bornée, est le cadet de sept frères ou sœurs qui sont dans un état d'imbécillité avancée. Dès sa naissance il avait une tête grosse, en forme de poire, des membres grêles et faibles, et un gros ventre. Son développement avait été tellement retardé, que ce ne fut que dans sa troisième année qu'il commença à pouvoir se soutenir sur ses jambes, et à prononcer quelques mots. Reçu dans l'institut à l'âge de six ans, il y resta plusieurs mois sans avoir su prononcer un son articulé ; timide ou sauvage, il se tenait isolé de ses camarades ; les objets extérieurs ne paraissaient faire aucune impression sur lui, même lorsqu'ils se présentaient sous des contrastes frappants ; ni la joie, ni la souffrance ne pouvaient le faire sortir de sa position accroupie ; ni sa physionomie blafarde, ni la forme de son crâne ne faisaient deviner l'état de son âme. Il assistait sans dire mot aux lecons, était très-distrait, et pendant longtemps ne parut prendre aucun intérêt à l'étude, quoique les fonctions de ses sens parussent normales.

On ne chercha point à forcer son intelligence avant que la digestion et la nutrition fussent convenablement régularisées, et que le système nerveux eût repris plus de vie et de sensibilité. Mais dès que cela eut lieu, on vit bientôt l'âme sortir comme d'un sommeil. Tout à coup le spectacle d'un magnifique coucher du soleil lui arracha cette exclamation : « *le soleil !* » et dès ce moment il continua de communiquer avec ses camarades par le moyen de la parole. Cependant même alors, sa faculté de compréhension était assez bornée pour qu'il ne pût distinguer entre eux les objets les plus rapprochés, tels que son doigt et sa main.

De même que les aveugles-sourds-muets, dont parle Burdach, il ne composait d'abord ses phrases que de verbes et de substantifs ; ce ne fut que plus tard qu'il sut employer les adjectifs. Sa mémoire, qui avait paru presque éteinte, rendit son éducation pénible et très-difficile. La méthode d'enseignement à l'aide d'images, avec quelques modifications du système de Pestalozzi, a paru la plus propre à favoriser le développement de l'embryon intellectuel. La chose la plus importante était de fixer son attention et d'exercer sa capacité à reproduire ses conceptions sous forme de mots distincts.

Après plusieurs mois d'exercices semblables, on vit se réveiller et s'harmoniser les facultés de perception soit externes, soit internes. L'arithmétique et surtout les calculs de tête (pour lesquels les crétins ont une disposition toute particulière), jouèrent un rôle important dans cette éducation intellectuelle. Les progrès dans la lecture furent assez notables, et on se servit dans ce but de la méthode mnémonique qui consiste à lier les sons à des images correspondantes. Les progrès dans l'écriture fu-

rent plus lents, ce qui est le cas de tous les crétins, et ce qui tient à la faiblesse de leurs bras. En revanche il montra assez de goût pour le chant et la musique. L'amabilité, l'affection et la reconnaissance sont devenues les traits saillants de son caractère. En résumé cet élève peut être maintenant considéré comme supérieur, en fait de capacité et d'instruction, à beaucoup d'enfants de son âge.

Une seconde variété du crétinisme congénial, que le docteur Guggenbühl désigne sous le nom de *mutisme des crétins*, se distingue, suivant lui, des sourds-muets ordinaires, en ce que l'ouïe n'est pas supprimée, et que le mutisme tient plutôt à un obstacle du principe immatériel, qu'à une cause matérielle. Quoique parmi les *crétins muets* il s'en trouve quelques-uns dont l'ouïe soit dure, dont les organes de la voix soient altérés, et dont le corps soit sous une influence scrofuleuse et torpide, la plupart d'entre eux entendent bien, ont des yeux vifs, une expression animée, une conformation grêle; ils sont capables d'une attention soutenue, et emploient, pour se faire comprendre, une pantomime assez expressive.

Cette forme du crétinisme prédomine à Trimmis, Katzis, etc., etc., Canton des Grisons, et dans la vallée du Rhin qui fait partie du Canton de Saint-Gall. Il est tel petit village qui en contient de trente à cinquante.

Tout en acceptant le diagnostic et la définition du *mutisme des crétins*, établis par l'auteur, tout en applaudissant à ses succès, il eût pu, ce nous semble, choisir à l'appui un exemple moins contestable que le suivant :

Un jeune garçon âgé de neuf ans, est issu de parents sains, mais il est né à Payerne, ville qui contient un très-grand nombre de bègues, de durs-d'oreilles, de sourds-

muets et de *crétins*? Il est depuis sa naissance dans l'impossibilité de prononcer et d'articuler les mots, il paraît aussi affecté de surdité du côté droit, mais son intelligence est assez développée, il est doué d'un talent mimique assez prononcé, et cherche à exécuter lui-même ce qu'il voit faire. A son entrée, l'état de son intelligence pouvait se comparer à celui d'un enfant de dix-huit mois, quoiqu'il fût grand et fort sous le rapport physique.

On parvint à le faire parler à l'aide d'une méthode phonétique soutenue, mais il conserva longtemps le bégaiement d'un enfant de deux ans, et même après dix-huit mois de leçons, il se plaît, à moins d'être averti, à prononcer les mots avec cette expression enfantine. Du reste il s'énonce en phrases intelligibles, et réussit dans les diverses branches d'étude. On espère aussi qu'il deviendra un artisan distingué.

Vices de croissance. Cette troisième forme du crétinisme congénial, qui domine dans plusieurs contrées, ne peut pas être mise en doute, lorsqu'on étudie l'ensemble des phénomènes de la nature. En voici un exemple.

Une petite fille de douze ans, n'a que trois pieds et demi de hauteur; sa tête est grosse, son visage pâle, lourd et large, son ventre est tuméfié, les extrémités sont courtes, grosses et ramassées. Elle avait primitivement quelques dispositions intellectuelles, mais nullement développées, de manière qu'envoyée à l'école, elle n'avait pu suivre ses camarades, et l'on en était resté à cette tentative.

A l'Abendberg, il a été d'autant plus difficile de lui faire regagner le temps perdu, que son âge était assez avancé; mais les progrès remarquables qu'elle a faits, soit au physique, soit dans la lecture, l'écriture, l'arithméti-

que, etc., prouvent qu'un enfant dont on a laissé détériorer les facultés morales et physiques, peut, sous un traitement judicieux, être rendu à la société, et même devenir un de ses membres utiles.

Après avoir donné un aperçu des travaux intéressants du docteur Guggenbühl, il aurait été peut-être convenable de rendre également compte d'une collection nombreuse de lettres qui lui ont été adressées, et qu'il publie à la suite de son rapport. Mais cette analyse, outre qu'elle donnerait lieu à des répétitions, risquerait de nous entraîner dans une discussion prolongée. La lettre du docteur Schneider, président du conseil de santé de Berne, qui renferme en particulier des documents statistiques en faveur de l'influence relative sur le développement du crétinisme, des terrains calcaires, ou primitifs et tertiaires, serait digne d'un sérieux examen sous le point de vue étiologique. Forcés de nous restreindre ici à des généralités, nous préférons renvoyer à un autre moment l'étude de cette question importante.

Qu'il nous suffise, en terminant, de rappeler quelques-uns des résultats définitifs de l'établissement, tels qu'ils sont consignés dans le rapport, et dans une lettre plus récente du docteur Guggenbühl.

La préface contenait ce passage : « Plusieurs de nos élèves chéris sont retournés chez eux depuis deux ans, sans éprouver de rechutes, et leurs facultés se sont assez développées, pour qu'ils aient pu suivre avec succès les écoles publiques. »

L'extrait de la lettre du docteur Guggenbühl en date

du mois de septembre 1847, vient confirmer nos espérances. « L'été passé, dit-il, a été de tous le plus intéressant depuis l'origine de notre œuvre, et nous le devons soit à l'activité et au dévouement de mes aides, soit à la création d'une espèce d'institut pour les mères des enfants crétins, qui désirent connaître en détail le traitement suivi.

« Depuis la publication de mon dernier rapport (en 1846), une vingtaine d'élèves sont sortis ; la plupart d'entre eux étaient maîtres de l'instruction élémentaire, et leurs forces physiques étaient assez développées pour qu'ils aient pu embrasser un état. Les plus malades se sont améliorés, et aucun n'est mort. Notre expérience continue à nous prouver que les caprices de ces enfants font bientôt place à des sentiments aimables, affectueux et reconnaissants. Nous en avons maintenant qui écrivent de jolies lettres à leurs parents, et qui possèdent des connaissances très-remarquables en géographie, en histoire naturelle, etc., etc. Je suis de plus en plus convaincu que le spectacle des phénomènes de la nature fournit les moyens les plus puissants pour réveiller les facultés engourdies, car ces phénomènes se renouvellent chaque jour dans notre localité grandiose, et fournissent à l'âme un excitant sans cesse nouveau. Je tâche maintenant de faire des expériences médicales sur l'action de divers végétaux propres à combattre ce genre de maladie, et qui croissent en abondance dans notre voisinage. A cet effet je fais construire à Paris une machine pour en extraire les sucs. »

Ainsi, on le voit, le docteur Guggenbühl ne se contente pas des beaux résultats déjà obtenus, il vise à faire

de l'Albendberg un établissement modèle qui ne laisse rien à désirer, et en réunissant, comme il le fait, la philanthropie la plus généreuse, à tout ce que la science peut enseigner, nous ne doutons pas des nouveaux succès qui l'attendent, et que nous appelons de tous nos vœux.

L.-A. Gosse D.-M.

Genève, 31 *décembre* 1847.