sporadic cases of cholera were *usual*. For instance, a wayfarer, weary, footsore and half-famished, would pluck an over-ripe cucumber from the tree and eat it, and by morning be dead of cholera as the result of his indiscretion; and yet these cases were not considered infectious or contagious, but that epidemics spread from cases occurring in crowded marts or great assemblages,—as they always do from the great congregations of religious pilgrims at Hurdwar.

But, from the careful study of most of the histories of the great epidemics of Asiatic cholera or yellow fever that have been transplanted to our continent, I think that *every one of them was preventable!*

When *once transplanted*, overcoming them or keeping them in subjection becomes quite another question, and may often eventuate in partial failure. The *materies morbi*, whatever they are, seem to become so extremely concentrated, widely and universally diffused, and *pestilential*, that even the birds of the air sometimes either disappear or die.

The safe and sure time to save property from destruction by fire is not when whole cities are ablaze, but before the torch of the incendiary is first applied.

CHRONIC HYDROCEPHALUS.

A CLINICAL LECTURE DELIVERED AT THE
GOOD SAMARITAN HOSPITAL,
CINCINNATI, OHIO.

BY F. FORCHHEIMER, M.D.

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Reported by James M. French, M.D., Former Assistant to the Children's
Clinic.

GENTLEMEN: The clinical history of this child is as follows: He was admitted to the hospital October 11, and was at that time twenty months old. The family history was that the mother, the maternal aunts and uncles, and the grand-parents are healthy; the father died of phthisis. The record of the examination, at the time of admission, shows that the child was very anæmic and badly nourished; that he had a large, square head, and that the fontanelles were still open, the protuberance prominent, and the lymphatics generally enlarged. There was observed, also, a prominence of the sternum and lateral depressions of the chest. The liver and spleen were slightly enlarged, and there was a slight curvature of the spine in the dorsal region. There was slight dullness on percussion over the apex of the left lung, bronchial respiration, increased vocal fremitus, and a few râles. The diagnosis then was *phthisis in rachitico*. The child was put upon proper treatment, but without benefit. It was found that the appetite, which had been almost ravenous, began to diminish, and there were slight elevations of temperature in the evening, although there was never very pronounced fever. Never during the whole course of the trouble has the temperature been above 100°. It was further observed that the child's whole manner of behavior was becoming changed. When brought into the hospital, the child was apparently normal in his manners; he did not cry more than a healthy child would cry, he

was not fretful; but he has since then become more and more fretful. Instead of sitting up on the bed with the other convalescent children, and playing with them and the other rachitic children in the ward, this child preferred to be alone. He would lie down and could not be kept up; so he was finally put into his crib and kept there. It was then noticed, upon more careful examination, that the pupils reacted in a peculiar manner. They began to react very poorly to the stimulus of light. They would no longer contract to their fullest extent, but after contracting to a certain degree, their contractility would cease.

Furthermore, as the child's head was very large when he first came under observation, we began to take measurements of it; and we discovered that, whereas, on the second of November, the head measured just 48 centimeters in circumference, on the ninth of the same month it had increased one centimeter, and ever since the circumference has gradually but steadily increased. The child has been put, as I have said, upon what we consider the proper treatment, but with no effect. He has lost steadily in weight. The bowels, instead of being loose, as is the rule in rachitic children, have now a tendency to be constipated, so that it is with difficulty that he has a passage. In other respects that I shall show you, the child has been behaving in a manner that indicates but one thing; and what that is, we shall now see.

Those of you who remember seeing the features and expression of the child some time ago, when I brought him before the class, will agree with me that he has lost a great deal since he was here before. The first thing that strikes you is the intense anæmia. The skin, instead of being a beautiful pink, as a child's skin should be, is almost colorless; it is waxy. The child is also intensely emaciated. You see, too, all the evidences of rickets; the chicken breast, the enlarged abdomen, and prominent epiphyses everywhere. But what we wish to examine especially is the head of the child. You see the peculiar form of the head. I find upon examination that the fontanelle is still widely open, and that I can feel very distinctly the sutures. Upon measurement of the head, now, I find that it is 18¼ inches in circumference, whilst the circumference of the thorax is only 14¼ inches. That gives you a correct idea of the relative sizes of the head and chest; but you must not forget that the circumference of a child's head at that age is normally somewhat greater than that of the thorax. Nevertheless, there is normally no such difference as you see here.

You notice that the child has his hands up to his head all the time; I take the hands away, and they immediately go up again. You look at the child's face and you are at once struck with the fact that it takes up much less of the outline of the head than it should. The greater part of the face extends from the eyes up; in other words, the child's head is too large. You are probably aware that an artist, in drawing a typical face, draws first an oval outline. This he then divides, by a straight line running parallel to the long axis of the oval, into two equal parts. This straight line he then divides into two parts by a

transverse line through its middle, and upon this last line he places the centre of each eye. Now, if he were to draw a hydrocephalic head, what would he do? He would simply lengthen the distance from the eyes to the top of the head, or the upper extremity of the oval, as I do in this drawing on the board. I have had an instrument constructed for the purpose of measuring these heads. It is an instrument of brass, the perpendicular rod of which is graduated to fractions of an inch, and, fitted to it, is a sliding bar that moves freely up and down. The method of using the instrument is to place the upper part on the child's head, then slide this movable part up or down until it is exactly opposite the middle of the eye. I then know, of course, what the distance from the chin to the top of the head is, and from the top of the head to the eye; and deducting the one from the other, I have the difference, if there is any, between the two. In the case before you, the whole distance from the top of the head to the chin is 6 inches; the distance from the top of the head to the middle of the eye is $3\frac{3}{8}$ inches; the distance from the middle of the eye to the chin is, of course, the difference, or $2\frac{5}{8}$ inches. We know then, from this examination, that the upper part of the head, the skull, is much too large in comparison to the lower part.

I have just called your attention to the fact that this child is constantly sitting with both hands raised to his head; he has either one hand supporting the head and the other in his mouth, or both hands supporting the head. In addition to this, he cries constantly; but another thing you will observe is that he never moves his head. Upon examination of the eyes, we find, in the first place, that there is a slight amount of photophobia, and, in the next place, that the pupils do not react at all to light. There is no abnormality in the position of the eye.

I am particularly glad to be able to call your attention in this case to a peculiar symptom which has attracted a good deal of attention, and whose value has elicited not a little discussion. It is, however, a peculiarity to which I have called your attention in connection with other cases. If I draw my finger over the skin of this child's thorax or back, there very quickly comes out a red line which gradually disappears; it is known as the *tache rouge*, or Trousseau's spots.

You hear this peculiar whine? The child keeps that up day and night. It is interrupted only by an occasional short lapse. Sometimes after a sleep the child awakes with a loud and very peculiar, shrill cry.

The question now is, what are we dealing with; to what is the trouble due; and how can we explain some of the symptoms? The disease is known as chronic hydrocephalus—an accumulation of serous fluid, comparatively poor in albumen, rich in potassium salts, rich in phosphates—that is found in the ventricles of the brain, and sometimes in the subarachnoid spaces. The great majority of cases that come under our observation are of that class in which the fluid is found only in the ventricles. When it is found in the ventricles the disease is called *hydrocephalus chronicus internus*; when it is found outside of the ventricles, in the subarachnoid spaces, it is called

hydrocephalus chronicus externus. I am willing to admit that I have never been able, clinically, to separate these two classes of cases; I have never, as yet, seen cases in which I could separate an internal from an external hydrocephalus; so that I shall have to discuss the subject with you as an entity.

This child presents to you such interesting features of beginning chronic hydrocephalus as you may not see again for years. What makes me think that this child is suffering from this disease? The chain of symptoms that I have described to you is sufficient to justify me in that belief. In the first place, and principally, the enlargement or dilatation of the child's head. That is proof positive that the child is suffering from hydrocephalus. Is such a thing possible as a child suffering from hydrocephalus without a dilatation of the head? Such a thing is possible; but of course it can occur only after the bones of the head have thoroughly ossified. Then the dilatation goes on at the cost of the brain substance. The fluid accumulates in the ventricles, presses upon the brain substance and causes it to occupy much less space than it originally did. Of course in such a case the diagnosis becomes very difficult; but in a case like this the diagnosis is easy. This child, when he came in, had a large head; but it has been proved by measurements that it has, since that time, increased very much in size, and it is still increasing.

To what else could this condition be due? To nothing else; this is either hydrocephalus produced by an inflammatory active condition, or hydrocephalus produced by a passive condition. What other symptoms have we that lead us to this conclusion? We have all these symptoms that I have described; we have the change in disposition, we have the change in the reaction of the pupil, we have the child suffering pain, and suffering in all probability from headache, which is indicated by his constantly putting his hands into his mouth. These are all corroborative symptoms of the changes going on in the head. This change of disposition is by no means a constant symptom. I have now in my care a child with hydrocephalus that is apparently healthy and, if anything, more jolly than children usually are, and in which there are none of these manifestations. The cases vary in regard to the symptoms they exhibit, these depending largely upon the amount of inflammatory change that is going on in the ventricles or in the meninges. If there be very great inflammatory changes, if there be a great deal of pressure, then of course these symptoms will be more pronounced. If, on the other hand, the child is born with too much fluid in the ventricles, there will not be many symptoms produced.

Another feature that I want to call your attention to more fully, is the fact that this child does not move his head. During the whole time that he has been sitting here, fully half an hour, he has not taken his hands away from his head, or moved his head in the least. When he is in his crib with high sides, he either supports his head with his hands or leans it against the sides of the crib. The explanation of this peculiarity is simple. It is because the child's head is too heavy for him. I want you to

remember these facts, for they are almost characteristic of the disease.

In regard to the other symptoms, it is not necessary for me to detain you long. Usually there is some derangement of the alimentary canal in these cases, the children suffering from constipation, as this child does. If the patient has had rickets and then becomes constipated, while it has other symptoms of hydrocephalus, this change will aid you in the formation of a diagnosis.

What is the cause of the hydrocephalus in this child? Tuberculosis. Tuberculosis produces hydrocephalus in several ways. I have shown you that the child has tuberculosis of the lymphatic glands, the so-called scrofulosis. All the glands of the child are very much enlarged. This may act in very many ways. First, the circulation of the lymph in the brain may be disturbed, so that we may have an exudation of lymph in the subarachnoid spaces or in the ventricles. Then the glands of the neck may be enlarged, and by pressing on the veins cause a transudation of the fluid elements of the blood. In the next place, the tubercular virus may undoubtedly cause chronic changes in the membrane lining the ventricles, in this way cause chronic inflammatory changes, and thus produce hydrocephalus. Which of these methods have been the cause of the disease in this case, I am unable to state. Is tuberculosis always the cause of hydrocephalus? By no means. I am speaking now of chronic hydrocephalus. Acute hydrocephalus, you remember, is synonymous with tubercular meningitis; but chronic hydrocephalus may be produced by a number of diseases, as by a tumor of the brain. Acute inflammations that become chronic may cause the disease; an acute meningitis may become a chronic meningitis. It is claimed that syphilis has something to do with the production of a chronic hydrocephalus; but with regard to that and the production of the congenital form of the disease, we know but little. Sometimes the disease is due to uræmic poisoning.

The prognosis is, in the great majority of instances, bad. Can you in an individual instance make a prognosis? Yes. I should say that in a case of this sort the prognosis must necessarily be bad. There are cases, however, in which, even after the exudation has become enormous, the child is reported to recover. Perhaps some of you have seen cases in which the exudation has become so great that the head has gotten entirely beyond the control of the child, so that it has to be moved about by another person, and in which the child lives and gradually recovers. After such a recovery there is, of course, a good deal of deformity. I shall never forget the simile used by one of my teachers. He said that he had a case of a child with an enormous head, that got well and grew to womanhood, but that her head looked like a raised map of Switzerland. The exudation being absorbed, the head contracted, but the sutures remained raised. You must, however, be on your guard about your prognosis.

The treatment is to allay symptoms. My treatment in this case is to give opium. I give to a patient like this sufficient opium to keep him quiet. As soon

as I find that this irritable state has disappeared, if it does disappear, I give internally iodide of potassium, regulate the bowels, and of course try to remove the cause. If the disease is due to uræmia, or if, in the course of a case of uræmia that you are treating, symptoms of hydrocephalus supervene, you must treat the case accordingly. I have not much faith in puncturing these cases, although it sometimes seems to give relief. I have no faith, either, in compression, for I have seen no good results from it.

THE HONORARY DEGREE OF DOCTOR OF MEDICINE.

BY E. INGALS, M.D., CHICAGO, ILL.

The ordinary degree of Doctor of Medicine is conferred by an institution of competent authority on persons who are supposed to have acquired, by diligent study and careful instruction, a sufficient amount of medical knowledge and skill to constitute them safe practitioners of the science and art of medicine. The attainments of the person applying for the degree are ascertained by a proper examination, conducted by the teachers in the institution by which the degree is given. The possession of the degree is evidenced by a diploma, which, after the person who holds it has complied with certain governmental requirements, assures to him all the rights and privileges of a member of the medical profession. But such institutions may also confer, *without an examination*, the additional honorary degree of Doctor of Medicine on persons already in the profession, who have publicly demonstrated their attainment of such a degree of learning and skill in medicine as would make the conferring it on them to be an act of such undoubted propriety as to be acknowledged without question by all. I bring this subject to public notice because the oldest medical college in this city has recently, on two different occasions, bestowed the honorary degree of Doctor of Medicine on a dentist. Neither of these persons—if I am correctly informed—has ever made medicine a special study.

Both are gentlemen of excellent character, and have been long and well known as skillful practitioners of dentistry. I do not, however, understand that these qualities authorize any medical institution to confer the degree of Doctor of Medicine on their possessor.

Dr. Barnum, D.D.S., of New York, who hit upon the happy device of the rubber dam rendered a great service to the profession of dentistry; but it would be grotesque and incongruous to bestow on him, for this reason, the honorary degree of Doctor of Medicine. With equal propriety it might be claimed by the plumber and optician. The medical degree already has too low a rank, and instead of adopting methods still further to degrade it, our institutions of learning should try to elevate it to a position more worthy of esteem and confidence. This can be done by conferring it only on persons of good character and high attainments. It would be interesting to know how our State Board of Health would treat such an honorary degree, should the