maculæ, though such a conjecture has been made in explanation of their production.

The œsophagus and alimentary canal exhibited the evidences of prolonged disease. The œsophagus was more especially the subject of pathological derangement. Its mucous membrane was hypertrophied, indurated, and nearly black. The cellular tissue below it in the same state. Its surface was lined with an ancient exudation of lymph, which had fallen into a state of putrid, semifluid sanies. This condition of the œsophagus will account for the difficulty the patient experienced in taking aliment and the remedies prescribed. It was impossible to sustain her forces.

This case, though it exhibits chronic structural disorder sufficient to account for the general loss of health, the exhaustion and feebleness of the patient, prior to the attack of purpura, throws no light on the specific pathology of that disease.

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ART. IX. *Cerebral Affections of Children.* By W. W. GERHARD, M. D. (Second part.)

IN the first part of this essay I published the details of ten cases of the cerebral affections of children; it was my original intention to have enlarged the series by annexing such cases as I had subsequently collected at the Children's Hospital of Paris. It would I find be incompatible with the limits of the journal to give so great an extension to a single article; I shall therefore confine myself to the cases already detailed, as the proofs of the deductions at which I may arrive; these observations, in common with others which I have not published, will form the materials of the second part of the essay.

The anatomical lesions constitute the distinctive characters of the three classes into which I divided the cerebral affections of children. The first class included such cases as offered an evident lesion of the brain, or its membranes, without the presence of tuberculous or other accidental tissue; this class is by no means so distinct as I had at first thought; the autopsies prove that the appearances in all the ten cases either possessed the evident characters of tuberculous matter, or approached them so nearly as to render it impossible to indicate the precise line of demarcation. The cases were selected from such as were least clearly dependent upon the deposit of tuberculous matter in the brain or its meninges, and therefore lead us to suspect a

fact which will be presently more fully developed; that is, the close connexion, if not identity, of one form of cerebral disease with the tuberculous affections. The classification which was legitimately assumed for the convenience of study, should therefore be modified, and the first division will include all evident alterations of the brain or its membranes, whether these alterations be connected with the presence of tubercles or tuberculous granulations, or without evidence of the existence of any accidental tissue. The second class includes cases in which the presence of one of the accidental tissues, other than the tuberculous, was detected; it includes but two cases, one in which a cerebriform or encephaloid tumour was found immediately beneath the junction of the optic nerves, and another which presented a fungoid tumour in the posterior part of one of the lateral ventricles.* The third class will not be modified, but will still include such cases as presented no evidence of alteration of the brain or the meninges.

The most important fact to which this series of observations has led, is the proof of the connexion of the cases included in the first class with the tuberculous affections. It was long since remarked, that many children who had died of a cerebral disease, were of a scrofulous temperament, but it was impossible either to confirm this remark, or to point out the cases to which it should be limited, without the aid of pathological anatomy. The obscurity which exists in the application of the terms acute hydrocephalus, or according to M. Guersent, meningitis, has led to the extreme diversity of opinion amongst physicians as to the mortality and possible cure of this disease; with the greater perfection of diagnosis a more exact appreciation of therapeutic means becomes practicable, and the singular discrepancy of opinion which prevails in the treatment of hydrocephalus may be readily explained.

The tables which follow, contain in one column the name, age, and sex of the children; under the same head the organs which contain either tubercles† or grayish semi-transparent granulations are noticed. The lesions of the pia mater are mentioned in the second column, which characterizes the affection. Another column contains the quantity of liquid found in the ventricles, and the fourth, the state of the cerebral substance. The tabular form will greatly facilitate the deductions.

* This specimen I presented to the *Société Anatomique* of Paris; a notice of it will be found in the first or second bulletin for 1834. (Archives Générales de Médécine.)

† The term tubercle is used in the generally received signification, that is, a rounded or amorphous substance, yellowish, hard, and with a dull, uniform surface if cut.

| | *Pia Mater.* | *Ventricles.* | *Cerebral Substance.* |
|---|---|---|---|
| 1. *Rebours*, male, æt. 6. Tubercles in bronchial glands and spleen. | Infiltration of yellowish, concrete, tough substance into the pia mater around the optic nerves. | Three ounces of limpid serosity. | Firm. |
| 2. *Deucar*, male, æt. 11. Scrofulous abscesses on limbs; bronchial glands cretaceous. | Yellowish substance in the fissures of Sylvius and around the optic nerves. Slight yellow infiltration on the convex surface. | Two or three teaspoonfuls of limpid serum. | Softening of central portions. Injection moderate. |
| 3. ——, male, æt. 15. Tubercles in pleuræ and bronchial glands; gray semi-transparent granulations through both lungs. | Yellow opaque matter around the optic nerves, and in the fissure of Sylvius. | Two ounces of clear serosity. | Firm; natural colour. |
| 4. *Erlemont*, female, æt. 5. Tubercles in left lung and bronchial glands. Caries of foot. | Slight thickening around the optic nerves, and hard semi-transparent granulations in each fissure of Sylvius. | Three drachms of limpid serum. | Septum lucidum, and fornix soft. In general firm, and moderately injected. |
| 5. *Jeannette*, female, æt. 2. Bronchial glands tuberculous. | Gray granulations on convex surface of the arachnoid. Concrete whitish substance in both fissures of Sylvius and around optic nerves, containing some hard whitish granulations. | An ounce to two ounces of milky serosity. | Firm; not injected. |
| 6. *Bellavoine*, male, æt. 6. Tubercles and granulations in both lungs, liver, and mesenteric glands. Bronchial glands? | Opacity in fissures of Sylvius, with gray semi-transparent granulations. | | Firm; not injected. |
| 7. *Trehlue*, male, æt. 6. Opaque tubercles in each lung; cavity in the right. Bronchial glands tuberculous. Peritoneum, liver, and spleen tuberculous. | Tubercle in the left hemisphere. Greenish tough substance with granulations in fissures, and at the base of the brain generally. Other granulations on upper part of right hemisphere. | An ounce of limpid serum. | Substance of brain firm, except around a tubercle. |
| 8. *Margotin*, female, æt. 8. Tubercles and cavity in right lung; granulations in left; bronchial glands tuberculous; ulcerations in small intestine. | Yellowish-white granulations in left fissure of Sylvius. | One to two drachms of serosity. | Not softened. |
| 9. *Landras*, female, æt. 6. Bronchial glands contain cretaceous matter. Tubercle in cerebellum. | Milky aspect of the arachnoid at the base. No granulations. | Three ounces of limpid serosity. | Firm; pale. |
| 10. *Fortin*, male, æt. 4. Tuberculous granulations in right pleura. | Opacity and thickening around the base of the optic nerves. Yellow opaque patch on the upper part of the cerebellum. | Greatly distended, perhaps six ounces of limpid serosity. | Not injected; slight softening of the central parts. |
| 11. *Mayen*, male, æt. 13. Gangrenous cavities in the right lung. No tubercles formed. | Yellowish hard granulations upon the convex surface of the hemispheres and at the base, along the vessels. | Not distended. | Firm; a little injected. |

| | *Pia Mater.* | *Ventricles.* | *Cerebral substance.* |
|---|---|---|---|
| 12. *Camier*, male, æt. 6. | Thickening of the arachnoid at the base, around the fissure of Sylvius. | Much distended by serosity. | Central portion softened. |
| 13. *Vernet*, female, æt. 14. Both lungs filled with very numerous gray granulations. Tubercles in bronchial glands, kidney, and small intestine. | Yellowish substance on each side of the median line, same substance at the base around the optic nerves, and in the fissures of Sylvius. Hard granulations upon the whole convex surface of the hemispheres. | Contain a drachm of troubled serosity. | Central parts and walls of the ventricles in general diffluent. |
| 14. *Poupart*, female, æt. 6. Cavities and crude tubercles in left lung. In right, numerous tubercles and granulations. Bronchial and mesenteric glands tuberculous. | Tubercles on the upper part of right hemisphere, with gray granulations on each side of the median line. Fissures of Sylvius filled with concrete matter containing gray granulations. | An ounce of troubled serosity. | Softening around the tubercles. |
| 15. *Dehaut*, female, æt. 4. Lungs contain tubercles. Bronchial and mesenteric glands tuberculous. | Tuberculous infiltration and gray granulations on upper part of left hemisphere. Fissures of Sylvius filled with granulations. | | Softening around the tubercles, and of the posterior part of left hemisphere. |
| 16. *Pachon*, female, æt. 5. Caverns, tubercles, and gray granulations in both lungs. Bronchial and mesenteric glands, spleen tuberculous. | Large tubercle in the inferior part of right hemisphere. Tubercles in the pia mater, and granulations in the fissures of Sylvius. | A drachm of serosity. | Softened in the fissures. |
| 17. *Blondel*, male, æt. 2. Cavern in lower lobe of right lung; tubercles and gray granulations in both lungs. Spleen, bronchial and mesenteric glands tuberculous. | Two tubercles attached to the cerebellum. Thickening and numerous granulations in the pia mater of the base. | Two drachms of serosity. | Softened at the centre and around the tubercles. |
| 18. *Terard*, male, æt. 7. Lungs and pleuræ filled with numerous tubercles. Ganglia tuberculous. | Tuberculous masses on each side of the median line. Granulations in the fissures of Sylvius. | Two drachms of serosity. | Parietes of ventricles and cortical substance in contact with the tubercles much softened. |
| 19. *Sances*, female, æt. 6. Very numerous granulations throughout both lungs. Bronchial glands tuberculous. | Granulations and patches of yellow substance on both sides of median line beneath the arachnoid. Base of the brain including fissures of Sylvius covered by yellowish substance. | Two ounces of serosity in ventricles. | Not injected; central parts softened. |
| 20. *Courtray*, female, æt. 7. Lungs contain tubercles and granulations. Bronchial and mesenteric glands tuberculous. | Yellow substance covering the central parts of the base, and the fissures of Sylvius; whitish hard granulations in this substance. Tubercle on the cerebellum. | Two to three ounces of serosity. | Not softened; nor injected. |
| 21. *Delouche*, female, æt. 5. Lungs full of miliary tubercles. Mesenteric and bronchial glands tuberculous. | Tubercles on the summit of both hemispheres. Tubercles and granulations at the base of the brain. | Two or three ounces of serosity. | Central parts softened. |
| 22. *Boudoux*, female, æt. 5. Cavity in right; tubercles in both. Bronchial glands tuberculous. | Granulations numerous on the convex surface. Yellow substance filled with the same granulations at the base. | Two ounces. | Cortical substance at the base flaccid, but without change of colour. |

| | *Pia Mater.* | *Ventricles.* | *Cerebral Substance.* |
|---|---|---|---|
| 23. (16. *Stamne,*) female, æt. 4. Tubercles in pleuræ. Cavities and numerous tubercles in lungs. Ulceration of larynx. Mesenteric and bronchial glands tuberculous. | Tuberculous mass on the right hemisphere, extending from the summit to the base. | An ounce of limpid serosity. | Walls of both ventricles much softened. |
| 24. ——, female, æt. 7. Tubercles in pleuræ; tubercles and cavities in lungs. Bronchial glands very tuberculous. | Semi-transparent granulations at the base, in the midst of a tenacious transparent substance which also contains a few opaque miliary tubercles. | An ounce of troubled serosity. | Parietes of ventricles much softened, including the central parts. |
| 25. *Colas*, female, æt. 4. Tubercles in lungs and pleuræ. Ganglia, spleen, and liver tuberculous | Yellow substance in the fissures of Sylvius. | An ounce of limpid serosity. | Firm. |
| 26. *Noireau*, male, æt. 4. Numerous granulations in lungs, pleuræ, and peritoneum. | Layer of yellow substance interspersed with granulations, covering the whole base of the brain. | Three ounces of serosity. | Cortical substance of the fissures of Sylvius softened and injected. |
| 27. *Benard*, male, æt. 7. Numerous tubercles in both lungs and pleuræ. Tubercles in ganglia, spleen, peritoneum, and kidneys. | Granulations and miliary tubercles in the fissures of Sylvius and cerebellum, and to a less degree on the convex surface of the brain. | Five ounces of transparent serosity. | Firm; not injected. |
| 28. *Kiffer*, male, aet. 4. Tubercles in left lung, bronchial and mesenteric glands. | Granulations on the convex surface of the hemispheres and in the fissures of Sylvius, without concrete substance. Tubercle in the cerebellum. | Two ounces of reddish serum. | Cerebral substance a little injected, but firm. |
| 29. *Lamiral*, female, aet. 7. Viscera not noted. | Opaque miliary tubercles on the convex surface of the brain. Granulations in the fissures, and tubercles of the size of peas adhering to the pia mater. | Half an ounce of serosity. | Central parts not softened. |
| 30. *Pincon*, female, aet. 10. Bronchial glands and spleen tuberculous, other viscera not noted. | Opaque hard substance around the optic nerves. Granulations on the right hemisphere and the cerebellum. | An ounce of serum. | Firm and pale. |

I am indebted to my friend M. Rufz for the last six cases of the thirty which are analyzed in the preceding table. I am in possession of two other cases which form part of the same series; one is relative to a child three years old, and the other to one seven years of age; both girls. In each case the yellow opaque substance so often mentioned was found at the base of the brain, with semi-opaque granulations adhering to the arachnoid; in both subjects tubercles existed in several viscera, and in the elder, the arachnoid, pleura and peritoneum were nearly covered by numerous gray granulations. The whole series includes, therefore, thirty-two observations; that is, all the cases which had been regarded as examples of the affection known under the names of hydrocephalus acutus and meningitis, and which had offered on dissection a lesion of the cerebral organs or membranes.

It will be seen that all the subjects, with the exception of Nos. 11 and 12, presented tubercles in other organs than the brain. In case 11, gangrenous cavities were found in the lungs, but no acute tubercles were discovered, so that the origin of these cavities is of course doubtful; but the existence of perfectly characterized miliary tubercles in the membranes of the brain proves that the case belongs to the same class as the other observations. I was not present at the examination of the case No. 12; I was indebted for a note of the autopsy to a friend who omitted to examine all the organs with care.

In every case analyzed, there was evidence of the existence of tubercles in one or more organs; the subjects were therefore all tuberculous, that is, offered the circumstances necessary for the formation of tuberculous matter; this disposition to the general production of tubercles occurred in no other disease which I observed, than that now investigated, and phthisis or evident tuberculization. The substance formed beneath the arachnoid was in many cases evidently tuberculous, consisting of round, hard, semi-transparent or opaque yellowish bodies, which presented the usual characters of tuberculous matter; in other cases these granulations were interspersed throughout by a homogeneous, semi-transparent, gelatinous matter. This disposition of the tuberculous granulations, closely resembles the appearance of a lung infiltrated with tuberculous matter, through which miliary tubercles are disseminated. Another form of the morbid production is, that of a yellow tough substance of consistence and aspect intermediary between fibrine and tuberculous matter, or not unlike concrete pus. It is difficult to ascertain the precise nature of this substance; in several of the subjects I have lately examined, I subjected small portions to microscopical examination, and distinctly recognised two distinct parts, that is, semi-transparent granular bodies in the midst of an amorphous matter. Whether the same distinction of the two substances exists in all cases, is yet to be decided.

The table indicates the quantity and characters of the serosity found in the ventricles; it is evident that the effusion of serum is variable in quantity, and far from constituting the necessary character of the disease.

The cerebral substance was sometimes softened, at others it retained a perfectly natural aspect; the rigidity of the muscles was by no means confined to the subject which presented the softening of the brain. Case No. 3 is an example in point.

The question whether this affection is of an inflammatory nature, excited formerly great interest. M. Guersent was of opinion that it

consisted in an inflammation of the membranes. M. Senn adopted this view. M. Charpentier, who had also observed it at the Children's Hospital of Paris, called it a meningo-cephalitis. I have reason to believe that M. Guersent, to whom the coïncidence of tubercles with this disease had been shown, has now modified his former opinions. The cases which I have detailed, induce me to regard this form of cerebral affections as closely analogous to the deposition of tuberculous matter in other organs. M. Rufz, who prosecuted his examinations in a separate service of the hospital, and examined with care all the organs of the children who died while under his observation during the last nine or ten months of the past year, (1833,) agrees with me in regarding the weight of evidence as decidedly in favour of the tuberculous nature of the affection. Those who may think the evidence sufficiently strong, may adopt this inference without agitating the question of the inflammatory or non-inflammatory nature of the disease. It will then in fact be placed upon the same footing as the formation of tubercles in other parts of the body, and such as are still disposed to regard tuberculous matter as one of the products of inflammation in the one case will be at liberty to extend the theory to the other. The existence of tubercles does not explain the cause of death; they constitute simply the anatomical character of the disease; the morbid actions which precede the anatomical lesions are probably not always in direct proportion to their effects. Thus, the case of Mayen presented only a few round tuberculous granulations in the pia mater, yet we can draw from it no direct inference as to the intensity of the disease during life.

Next to the development of tuberculous matter, the anatomical phenomenon of greatest interest is the lesion of the mucous membrane of the stomach. Of the ten cases detailed, six presented an unequivocal alteration of this organ.* Of the other cases not detailed, about four-fifths offered a lesion of the stomach. The alteration of the mucous coat was sometimes limited to a simple thinning, more rarely it was thickened, in other cases it was mamillated. In some subjects the thinning of the membrane was very great, but it was nearly limited to the great tuberosity and disposed by bands, generally longitudinal, but sometimes united by transverse lines; these bands contrast by their bluish tint with the surrounding membrane. The thinness in

* We mean by unequivocal lesion an alteration of thickness or consistence, or other apparent change of structure; livid punctuated redness may also be regarded as a lesion, but the lighter degrees of injection, or the general redness of imbibition, constitute doubtful evidence of inflammation.

bands of the mucous membrane seems an undoubted lesion; the gelatinous softening may be an appearance produced after death, at least the question is still doubtful. The thinning of the mucous membrane is not peculiar to this affection; it occurs in many other diseases, especially the tuberculous; but some years since, when the physiological doctrine engrossed so much attention, the alteration of the stomach was looked upon as a proof of the gastric origin of meningitis.

*Symptoms.*—One of the first and most constant symptoms was *vomiting;* of the ten cases which I published in the preceding number of the journal, eight offered this symptom at the commencement, or during the first days of the affection. In two it was stated not to have occurred, but the parents of one of the children were possessed of too little intelligence to render the information received at all certain. Of four cases, (not published,) in which some details could be obtained respecting the same symptom, three were accompanied by vomiting. The inference is clear, that vomiting forms one of the first symptoms in a large majority of patients affected with this form of disease.

*Cephalalgia.*—This symptom existed in all the cases in which sufficient data could be obtained to ascertain its presence or absence. The cephalalgia usually continued until succeeded by delirium or coma.

*Constipation.*—Immediately after the vomiting and cephalalgia, the dejections either cease or become extremely rare. Case No. 2 offers the only apparent exception. Stools may sometimes be produced by the action of a cathartic, but with difficulty; they were not followed by a notable diminution of the symptoms.

*Delirium.*—A noisy, violent delirium is very rare in this affection. Nos. 1 and 3 of the cases published are the only instances of it which I have witnessed, The low muttering delirium is frequent; I have myself ascertained its existence some days previously to the termination of the affection, in nearly one-half of the cases which were admitted. The absence of muttering delirium in a number of cases could not be satisfactorily established, in consequence of the necessity of relying upon the reports of the attendants of the sick. Moans, or low plaintive cries of the kind first noticed by M. Coindet of Geneva, are frequent in the affection when the coma becomes very profound; they are however by no means characteristic of the disease. The movement of the lower jaw, *(machonnement,)* exists in a large number of cases; it is usually observed at the same time with the low plaintive cries.

Convulsive movements of one or more muscles were detected in nearly one-half of the cases, (five in twelve,) which were examined

on this point. The absence of this symptom cannot be affirmed with entire accuracy, unless the child had been much more closely observed than is practicable in a large hospital. The spasmodic movements occurred in the earlier or second stages of the disease.

*Lesions of the organs of movement.*—These were an increased and permanent contraction of the muscles; or secondly, perfect or imperfect paralysis. Of the ten cases published, but one, No. 7, offered no evidence of permanent contraction of the muscles of either the face or limbs. Of the other cases, Nos. 1, 5, and 10, presented but slight traces of rigidity; in all of these cases the quantity of serosity in the ventricles was remarkably great. Of the cases not published, two only offered no distinctly marked contraction of the muscles; in these the same abundance of serum in the ventricles was observed. The great secretion of serum seems therefore to coïncide with the absence of the muscular contraction observed in the large majority of cases. The degree of anormal contraction is very various, in some patients it is observed in the slight distortion of the features without paralysis, in others there is a little rigidity of the muscles of the neck, and in the more marked cases, strong contraction of the muscles, always more distinct in the upper than in the lower extremities, and generally more evident on one side of the body than on the other, without being strictly limited to either.

The rigidity of the muscles is most easily discovered at the elbow, but care must be taken not to mistake the voluntary resistance of the muscles caused by the annoyance of the child for the permanent involuntary stiffness. At first this distinction is hardly to be made, except by a careful comparison of both sides of the body. In some cases the contraction of the muscles is so marked that the limbs are in a state of permanent flexion, which can only be overcome by a strong effort.

*Paralysis* existed in none of the ten cases published, but the power of voluntary motion was greatly *diminished* in all. Perfect paralysis did not occur unless immediately before death. *The sensibility* at first is almost invariably augmented, the increased susceptibility to impressions is not confined to the muscular system, the senses are more acute, bright light and loud sounds are both evidently painful; the same increased susceptibility is betrayed by an aversion to questions and impatience of the least disturbance. The sensibility invariably diminished as the symptoms became more intense, and in some cases, (three and five for example,) it was extremely obtuse. The loss of sensibility coïncides with the rigidity, unless one side of the body be in a state of nearly perfect paralysis.

*Senses.*—The pupils were generally dilated; thus, of the ten cases, in but one were they more contracted than usual, in two others there was neither evident contraction nor dilatation. Of the other cases none are noted as presenting the anormal contraction of the pupils; rather more than half the number offered an evident dilatation. Strabismus existed in a majority of the cases. Loss of sight occurred but rarely. The hearing was acute, even more so than in the natural state in the patients who entered the hospital in the earlier periods of the disease; it afterwards became extremely obtuse.

The intelligence at first offered no deviation from the natural state, except the increase of vivacity and greater petulance of the child; but it gradually became dull, and at the same time confused; this state was replaced by delirium or stupor. Complete coma existed in many cases before death. The stupor was not unfrequently much diminished during the course of the disease, sometimes to so great a degree that the child could understand and answer correctly the questions proposed to it; this remission is by no means a favourable sign.

The symptoms detailed are those of greatest interest in this affection, the patients were examined in relation to several other points, but they are scarcely of sufficient moment to render an analysis absolutely necessary; except of the state of the pulse and the respiration. The pulse it will be seen was slow, 70, 80, or 90 at first, and through the whole disease until near the termination, when it became much more rapid; the slowness of the pulse was found in all the cases which were admitted some days before death; the augmentation in the number of the pulsations was almost constant, there was but one exception, (No. 2,) amongst those which I examined. The respiration was at first irregular, neither slow nor much increased in frequency, but accompanied with a peculiar sigh in the expiration; towards the close it became stertorous, more frequent and much more elevated.

In concluding the sketch of the symptoms the countenance should not be forgotten; as in this affection it is so peculiar, that the sister of one of the wards at the Children's Hospital was accustomed to distinguish the disease with much accuracy from the mere aspect of the child. The face is pale, with occasional flushes of redness on one or both cheeks; mouth frequently a little deviated; lips compressed, or half open; the eyelids are almost invariably closed, or a little separated; nostrils widely dilated. But the most distinctive character is the peculiar listless expression, with occasional grimaces and movements of the lips, as if tasting an article of food; this character does not admit of description, it must be seen to be appreciated.

*Diagnosis.*—The disease just described is often confounded with certain cerebral symptoms, such as convulsions, which are the attendants of affections other than the tuberculous, or produced by some accidental cause; hence arises the mistake of M. Charpentier, who has evidently compared this fatal disease which he had observed at the childrens hospital with different affections which he witnessed in private practice; the mortality was necessarily very different in the two classes. Can the diagnosis be satisfactorily established? I do not venture to think so, the question is so difficult that it would be presumptuous to resolve it hastily. With the existing facts, we may however attain a greater precision than could have been reached without the aid of pathological anatomy.

I have met with but few diseases resembling this form of cerebral affection, these are—1st, the typhoid or nervous fever of Paris; 2d, the development of an encephaloid mass at the base of the brain; 3d, tubercles in the cortical substance without evident disease of the membranes; 4th, a form of disease which presents closely analogous symptoms, but in which I could discover no decided traces of cerebral lesion; and 5th, the anomalous symptoms which are often confounded with this affection.

The typhoid fever may be readily recognised from the existence of diarrhœa, tympanitis, petechiæ, sibilant rhonchus, and decided febrile pulse. None of these symptoms are met with in the ordinary forms of the cerebral affections. The peculiar alteration of the functions of the nervous system is another distinctive mark.

The encephaloid tumour which I found at the base of the brain in one subject, could only be confounded in symptoms with the isolated tubercles in the cerebral substance, its chronic duration was sufficient to distinguish it from the affection of the membranes.

Tubercles are sometimes found imbedded in the cortical substance of the cerebrum, and more frequently cerebellum, without the existence of any peculiar symptom during life. In other cases the tubercles are larger or more numerous, and then give rise to distinct symptoms, such as partial paralysis and rigidity of the muscles; these cases may be distinguished by their chronic nature, by the gradual diminution of the intelligence and progressive increase of the symptoms. I have collected two observations of this variety, which it is not necessary at present to publish. The fourth variety is probably but a form of the disease described in the observations; the child was tuberculous, and the symptoms were nearly similar to those observed

in other patients. The apparent severity was however so much less than in the other cases, that strong hopes were entertained of the child's recovery. Was this case an example of the disease before the secretion of the morbid substance?

The last form of disease which is confounded with the tuberculous meningitis, is the various complications supervening during the course of other affections, especially of the alimentary canal. The last variety is in many instances within the controul of treatment, and by no means subject to the same laws as the tuberculous disease. The diagnosis is difficult, but the cases which I have witnessed at the Children's Hospital were still perfectly distinct. In other instances, the symptoms seem to be less easily recognised; I am ignorant whether these simulate the tuberculous affection in all respects.

The diagnosis is then to be founded rather on the succession of the symptoms, than on the separate existence of any one of them. A child labouring under a tuberculous disease of the lungs or abdomen, who should be taken with vomiting, constipation, slowness, and perhaps irregularity of the pulse, with the disorders of the nervous system already enumerated, would be regarded as labouring under this affection. If the child possess all the appearances of perfect health, the diagnosis is a little less certain, but still the order of the symptoms would in the vast majority of cases indicate the nature of the disease to be tuberculous meningitis.

*Treatment.*—All the cases which I witnessed were fatal; the want of success was not peculiar to the years during which I had observed. M. Charpentier, who had collected a series of cases eight years previously, did not see one recovery at the hospital. M. Rufz collected two cases of cure, which at the time he regarded as examples of the disease. The case to which I alluded of doubtful disease, seemed on the point of recovering, and another patient whom I saw before commencing the series of observations, recovered from the earliest symptoms; this child returned to the hospital some weeks afterwards, and died of tubercles in the lungs; on dissection the membranes of the brain were evidently thickened, although the precise alteration was not noted. The bad success of the treatment was not owing to its want of energy; some of the physicians had tried the most vigorous antiphlogistic means, others had prescribed purgatives together with depletion; and blisters were employed in some cases. I did not witness any attempt to produce rapid salivation by the use of mercurial ointment.

Medicine is necessarily as powerless in the decided cases, as it

is in phthisis or other tubercular affections; but there must be a stage preceding the development of the anormal substance; in this stage therapeutics may be of utility. I have nothing new to add relative to the treatment, which can scarcely become more positively fixed unless the distinction between the several varieties of disease classed under the term acute hydrocephalus or meningitis, be clearly made out. But as it is clearly the duty of a physician in treating cases hitherto incurable, to use those means which seem to offer the greatest chance of benefit, in making my election I should rely chiefly on moderate depletion, and an attempt to salivate the child by mercurial frictions. Very free depletion is not called for in most cases; the patients are scrofulous, and generally do not well bear a great loss of blood.*

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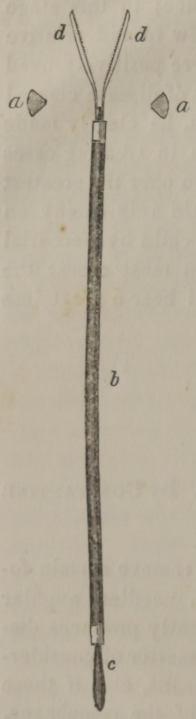
ART. X. *Description of a New Œsophagus Forceps.* By CONSTANTINE WEEVER, M. D. of Detroit.

IT is admitted to be of the utmost importance to remove certain foreign bodies from the œsophagus, such as pins, needles, angular pieces of bone, &c. as their presence not unfrequently produces disastrous and fatal consequences; yet it is always a matter of considerable difficulty to extract them with the usual means, and if those bodies are situated near the cardiac termination of the œsophagus, it has generally been found impossible to remove them by the mouth, and the only alternative has been to thrust them into the stomach. This want of success appears to depend chiefly upon the imperfection of the instruments ordinarily employed for this purpose. Every surgeon who has had occasion to use them, knows that their employment is a blind and unscientific groping in the dark, which almost always ends in disappointment.

The above considerations, and a knowledge of the success which has attended the seizure of urinary calculi by the lithontriptic forceps, led me to construct the following instrument.

* The first part of this article was transmitted from Europe; the proof sheets were corrected by a friend, who was unable to decypher a few words of the manuscript; this circumstance will account for some singular verbal errors.

It will be readily perceived that this instrument is particularly calculated to remove those articles from the œsophagus which would prove the most dangerous to life by their presence in the alimentary passages; pins, needles, and sharp pieces of bone, are of this class. These forceps can be easily pressed down the throat, as the elastic branches accommodate themselves to the varying dimensions of the passage, and if the extraneous body does not come within their grasp in their first introduction, they must be withdrawn and the stilet turned one-fourth round, which will bring the blades of the forceps at a right angle with their former position; when they are again to be passed down, and the object of search will be seized with much certainty. When the inner branches pass beyond the foreign substance, the movement is accompanied by a sensible click, which gives notice that the tube is to be pressed down a short distance while the stilet is held stationary; by this means the blades of the forceps are closely approximated, and whatever is within their grasp, will be firmly retained, and may be generally withdrawn without difficulty. One advantage of this instrument is this, that the materials of which it is composed, may be obtained in nearly every country village, and it can be constructed by any man of ordinary ingenuity. In children, a flexible catheter will answer well for the tube, by removing its vesical extremity; and in adults the stomach tube, or in its absence, take a piece of wire of convenient flexibility, two feet in length, put one end of this into a circle about one-eighth of an inch in diameter, and then bend this circle to a right angle with the shaft of the wire. This will serve every purpose for compressing the blades of the forceps.




*b.* An elastic tube.
*c.* Whalebone stilet extending through the tube.
*d. d* Blades of the forceps firmly fixed to the stilet.
*a. a.* Section of the blades of the forceps, the proper size; their outer side is rounded, and the inner is brought to an edge, and is made rough like the end of a common forceps.

The springs or forceps proper can be admirably constructed from the mainspring of a watch, by moderately heating it in the blaze of a lamp at the points where it is intended to make the acute angle, and form the internal branches.

*Detroit, January 15th,* 1834.

[Note.—Mr. George P. Schively, an ingenious surgeon's instrument-maker of this city, to whom we communicated the preced-