geon from at once attempting to repair the injury, instead of resorting to the unsurgical makeshift of suturing the end of the ureter in the abdominal wound, or to the serious procedure of removing a healthy kidney from a patient already depressed by a long and bloody operation.

The well-known difficulties attending secondary operations for the cure of ureteral fistula, even in the hands of experts, would seem to render it imperative that an attempt should invariably be made to secure immediate repair. As regards the method to be adopted in the individual case no fixed rules can be formulated. Each must be studied separately. The technique is now sufficiently familiar, at least theoretically, but the opportunities for its application are so rare that few surgeons have an opportunity to acquire such confidence and dexterity in dealing with this complication as with others which occur in connection with abdominal surgery.

CLINICAL HISTORY OF A CASE OF BLINDNESS FROM CONGENITAL DEFORMITY OF THE OCCIPUT.¹

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On October 20, 1899, through the courtesy of Mr. Frank R. Harrison, of East Liverpool, Ohio, a student in the third-year class of the Department of Medicine of the University of Pennsylvania, the writer was given the opportunity to study a case of blindness in a four-year-old girl.

The patient, the fourth of five children, was born at full term after an uncompliqued labor not requiring any aid. The first child was living and well. The second was stillborn at full term, the infant being badly macerated, and reported to have been dead for at least a month previous to its birth. The third, which was also a full-term child, lived but a few minutes. The fifth was born dead. In none of these labors except the first was there any physician in attendance. The mother, who was slightly undersized in height, had never been strong. The father, not a blood relation of his wife, died from renal disease some four years before the patient was studied. His habits had been bad, he having been in the habit of drinking at least three quarts of whiskey per week for years.

No family history of hereditary disease or congenital trouble could be elicited or determined, except that an aunt on the father's side was said to have died of tumor of the breast, which, from an incomplete history given, seemed most probably to be carcinomatous in character. The mother disclaimed the existence of any disease, though it was said

¹ Read before the October, 1901, meeting of the Section of Ophthalmology of the College of Physicians of Philadelphia.
that from time to time she exhibited a number of characteristic and well-pronounced hysterical stigmata, these being associated with slight rises of temperature, during which an elevation of a single degree was sufficient to produce an attack of delirium.

The mother stated that both of her children ‘had since birth slept with their eyes open,’ and that while sleeping a bloody froth from an unknown source often escaped from their mouths. She also asserted that the patient was born with a badly shaped head, and large, prominent eyes; but that the child could see some little until it was three years of age, when it became totally blind, and the protrusion of the eyeballs grew more pronounced. She had never noticed that the patient preferred to look to one side or to the other.

The only diseases that the patient had ever had were so-called ‘croup’ and measles, these being diagnosed and treated by a competent physician. There was not any history of epilepsy or convulsions. The child's mental condition had always been good.

Careful physical examination failed to evidence anything wrong, except that the head was disproportionately small and quite deformed posteriorly, and that the eyes were prominent, divergent, and in constant motion. The occipital protuberance was almost wanting. The occipitoparietal suture was not well closed, the thickened serrated edges of the occipital and parietal bones curving outwardly. In front of the coronal suture the frontal prominence appeared, when laterally viewed, as if slightly raised into a dome-like elevation. The superciliary ridges were quite flattened. The orbital cavities seemed somewhat shallow, especially to their nasal sides. The root of the nose was broad, and the internal commissures of the eyes were too wide apart. Both the superior and the inferior dental arches, particularly the lower one, were shallow, while the chin showed a marked recession and apparent incompleteness of development. The nasal orifices were small. The mouth, which was almost constantly kept open, was employed for breathing purposes. Both pupils, as can be seen even in the reproductions of the photographs, showed a number of characteristic faults.

The eyelids, which were large and freely mobile, stretched across a pair of enlarged and prominent eyeballs that enjoyed free and full movement. The right eyeball was the larger and the more prominent. The palpebral fissures were very wide and abnormally long. Both globes had their antero-posterior axes directed outwardly, the right one being more divergent. The eyes were in a state of constant rotary nystagmic movement. They could be pushed but slightly backward. There were not any evidences, either solid, fluctuating, or pulsatile, of orbital growth or tumor.

The pupils were round, that of the left eye being three and a half millimetres in size, and that of the right one three millimetres in diameter. Repeated examinations of the irides, which were normal, showed that they were freely and equally mobile to light-stimulus, carefully thrown from every part of the ordinary visual fields; while forced attempts, by which accommodative action should be brought into play, gave most excellent and prompt iridio reactions, and strong convergence, obtained by having the subject fix in the direction of its finger-tip held against its nose, produced marked pupillary contraction.

No clonic movements of either iris sphincter could be seen, though
persistently searched for. Neither pupil dilated when the skin of the back of the neck was pinched. The elevator muscles of the upper lids and orbicularis muscles were freely active. The excursions of the two eyeballs, in spite of their prominence and divergence, were good in all of the ordinary physiological directions. The external portions of the two organs failed to present any areas of analgesia or anesthesia. Local thermometric studies proved negative.

Thorough study of the interior of the eyeballs with the ophthalmoscope failed to show a single abnormality or sign or mark of any form of inflammation. The media were clear. The choroids, the retina, and the optic nerve heads were healthy in every detail. Their contained blood-currents were well tinted, and a venous pulse in the larger retinal stems could be readily produced by pressure upon the globes. Intracocular tension in each eye was normal.

![Fig. 1.](image)

Careful examination showed the well-known catoptric images, the movements of the reflexes proving that there was a true accommodative play in each eye. Transillumination, as far as could be usefully employed in such a young subject, did not reveal anything abnormal.

Repeated study, with every practical form of objective and subjective test that could be conveniently employed at the time, conclusively showed that the little patient could not see even the strongest light-stimulus with either eye. Her behavior and her manner were typically those of one who is blind.

The unusual pupil signs, such as the hemianopie iris inaction (or Worslicko's sign), and the Knies pupil-symptom were unsuccessfully searched for.

In spite of the extreme youth of the patient, her mental condition was so excellent that more or less perfect essays were unsuccessfully made to discover some of the higher psycho-physiological conditions,
such as mind-blindness, visual hallucinations, word-deafness, etc. There were not the slightest evidences of any hemianopsias. There was a most probable existence of a true cortical visual amnesia, the little patient being almost constantly unable to revive visual memory pictures.

Physical examination showed that the various organs were healthy. The thyroid glands were not enlarged. There were not any cardiac or pulmonic complications. Both the deep and the superficial reflexes, as far as could be practically obtained, seemed normal for age and condition. The teeth, which were the primary ones, were irregularly placed and badly cared for: they did not exhibit any coarse signs of general hereditary or acquired disease. Examination of the nasal cavities revealed, as was expected from the constant mouth-breathing, the presence of adenoids; these sprang from the lateral walls of the anterior ethmoid cells, and almost completely filled the vault of the nose. Examination of the urine was negative.

Fig. 2.

Although at this single visit almost every ocular symptom that was deemed of the least importance for the determination of the cause of the blindness was searched for, yet the child was admitted into the wards of Wills Eye Hospital in order that the writer might at his leisure restudy this now, to him, most interesting case, thus obtaining in its entirety the above report of the conditions.

Some careful cephalic measurements made at this time were mislaid, though, fortunately, two photographs (got by much diplomacy and with much trouble by Mr. Harrison), shown in the accompanying reproductions, illustrate the general facial appearances very well, and thus, with the deterioration, offer themselves as no mean substitutes.

1 It will be noticed that the hair has been intentionally dressed in such a way as to conceal the posterior portion of the head.
During the child's two or three days' residence in the hospital Dr. W. W. Baletto, of Pueblo, Col., who happened to be visiting the writer at the time, kindly removed all of the adenoid tissue.

Tapping of the spinal fluid and cranial and spinal trephining were thought of, but no opportunity was given to put these procedures into practice.

Several months later the child was said to have died from an intercurrent and unrelated disease. Autopsy, though strenuously sought for, could not be obtained. The other child was not studied.

Remarks. Unlike most of the cases of blindness found in association with deformed crania from improper synostosis, with its deficiencies and overdvelopments, this extremely rare occipital type of osseous disease failed to exhibit many coarse motor changes in and around the eye.

The family history of a dissipated father, whose ancestral tree was bad, and a probably infected mother gave answer in great measure for the obtaining of such a product. In view of Friedenwald's observation of the preponderance of the male subject in similar cases, the sex of the case—a female—is of interest.

The presence of the adenoids cannot in any way account for such a grouping of symptoms.

In this character of subject the early want of proper binocular stimulus from imperfect visual perception, with a constantly increasing interference of sensory receipt, soon disturbs much of the interrelation of the two motor portions of the apparatus that are intended for interassociation of vision, causing the eyeballs to diverge and nystagmus to appear.

Far different is this from that which is seen in the oxycephalic or even the gross hypsicephalic types of cranial deformation, with their characteristic steeple-shaped or dome-like heads. In this class of degenerates the signs of disturbance in the visual apparatus are marked by gross inflammatory and degenerative changes taking place in the orbital contents. In this type, in which there is an improper union of the parietal with the occipital and temporal bones, with compensatory osseous overdevelopment along the sagittal suture and in the position of the anterior fontanelle (giving the head the appearance of a sugar-loaf), the primary changes upon delicate structures, such as nerve, vessel, lymph-channel, and even the eyeball itself, soon set into activity a whole chain of low-grade inflammatory and pressure degenerations which result in the functional destruction of the ocular globes and optic nerves. Externally, grossly proptosed, widely divergent, coarsely degenerato in many of its parts, but indifferently mobile, the worst

1 It is possible that this last symptom is also due to an imperfect development of the paths between the visual cortex and the so-called primary optic ganglia.
cases of this type of ocular involvement to the veriest examples, with their signs of slight prominence, fixed irides to light-stimulation, and optic nerve degeneration, may be seen.

The scaphocephalic or boat-shaped malformation of the skull, with its extremely broad forehead, caused by an improper union of the sagittal suture between the medial margins of the parietal bones, is more disposed to give rise to all of the well-known symptoms of optic neuritis, followed by atrophy. Prominent, sightless, and divergent eyes, with more or less fixed irides to light-stimulation, in subjects of fair intelligence at best—victims of convulsive seizures, as a rule—characterize the most pronounced cases in this class of abnormality.

In the leptocephalic types, in which the heads are extremely small, caused by a premature union of the fronto-sphenoidal suture between the nose of the frontal and sphenoid bones, post-neuritic atrophy is extremely apt to appear very early in life.

The most curious trigonocephalic or three-cornered type of cranial deformity, with its small end situated anteriorly, which is due to an improper union of the frontal and parietal bones or the frontal bones at the coronal or frontal suture, has post-neuritic atrophy for its most pronounced ocular sign.

In the present case—an extremely rare example of what might with propriety be termed the occipital or occipitoparietal type of cranial malformation, in which the configuration of the posterior portion of the head is that of a flattened, but slightly curved surface, extending irregularly in an upward, forward plane to meet the frontal protuberance—the most marked ocular signs are almost wholly sensory in character. Vision in each eye is nearly or entirely lost. The orbits are shallow, particularly at their postero-medial parts. The eyeballs are but slightly proptosed, somewhat enlarged, and enjoy full freedom of movement. The entire motor apparatus of the exterior of the eyes, with the exception of a few minor discrepancies of probable improper nuclear action, is in proper working order. The pupils are but slightly if any oversized. The irides are prompt to light-stimulus, efforts for accommodation, and convergence. The ciliary muscles are active. The eye-grounds, in every detail of neuronic, vascular, and lymph structure, appear normal; in fact, the eyeballs, with their entire adnexa, are healthy, and perform their functioning duties properly.1

This complexus of symptoms, with its absolute blindness,1 and con-

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1 Careful comparison of Stodd's well-known though imperfectly reported case in a thirty-three-year-old man, shows that his patient was subject to convulsive attacks which might have developed in the writer's case had it lived longer.

2 As may be inferred throughout this paper, the writer is disposed to concur with Friedenwald's suggestion that "in many cases the optic nerve affection is due to temporary increase in Intracranial pressure." In this type the query arises, May not the probable cortical and
comitants of slight globular protrusion, divergence, and rotary nystagmus as the only ocular signs, constitute a most remarkable clinical picture. In it is seen a blindness the proving of which necessitates a most careful study of every possible direct and indirect ocular detail; a blindness that from the ocular signs and associated conditions may be safely assumed as intraocular in type, and, most probably, until autopsy proves to the contrary, cortical in character. In such cases it is fairly certain that there is a healthy receiving material which is properly functioning; all of the ethereal wave vibrations that ordinarily give rise to the perception of color being duly received and transmitted to an intraocular position that is intended for use in ultimate perception. This lower cerebral cortex—known as the visual cortex—is, unfortunately in such cases, as in the one herein detailed, of such imperfect development and of so feeble a functioning and resisting power that it early loses much of its physiological activity, and, sooner or later, degenerates into a functionless and, at times, a useless organ.


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Double Hydrocele in an Infant.

The first case I show today is a male infant seven weeks old, whose parents bring him to the hospital on account of an enlargement of the scrotum. They say that the swelling has developed gradually and does not increase materially when the child cries.

The most common conditions which would cause enlargement of the scrotum in an infant would be either hernia, hydrocele, or a growth such as sarcoma or tuberculosis of the testicle. Upon examination of the swollen scrotum I find that it presents an elastic feel, that I can feel the testes, which are normal in size, and that the tumor cannot be connected necrotic inflammation and degeneration have been dependent in measure upon localized stretching and inflammatory processes taking place in and around a series of imperfectly made and quite readily disturbed tissues in the occipital region? A clinical lecture delivered at the Children’s Hospital, October 16, 1901.