these cases to any hospital where mother and child are not taken in together, or where provision is not made at least for partial breast-feeding of the baby and for preservation of the mother's milk supply till the time of the baby's discharge.

By increasing the number of hospitals where such humane methods are combined with technical skill, physicians can raise the standards of treatment for ophthalmia neonatorum. They can raise these standards again by demanding of local boards of health, and of the district health inspectors, well paid consultants, and where need be the regular paid attendance of ophthalmologists. And, once more, they can raise these standards above their present average level by insisting on constant trained and skilful nursing.

How far even this minimum requirement will raise present standards, you will see from the three case histories:—

CASE 1. Child born Sept. 6, 1911. No preventive used. Symptoms observed Sept. 11. Treatment begun Sept. 12. Case reported according to law. No trained nurse. No specialist called in consultation. The mother was helped by her mother-in-law. Case transferred to the Eye and Ear Infirmary Oct. 10, *blind* in both eyes. Physician, Dr. X, Harvard Medical School, 1904, member of the Massachusetts Medical Society.

CASE 2. Child born April 16, 1912. Symptoms in one eye observed at birth; in the other eye on the third day. No preventive used. Eyes not washed out by the doctor and no instruction given as to washing out the eyes. Case reported according to law. No trained nurse in attendance; no consultation with a specialist. The mother was helped by a neighbor. From April 23 to April 27 no physician in attendance. Case transferred to the Eye and Ear Infirmary April 29, *blind*. Physician, Dr. Y, studied at the Baltimore Medical College and graduated at the medical department of George Washington University. He came to Massachusetts in July, 1907, when he failed to pass the examination given by the Board of Registration in Medicine. He was re-examined and registered in the autumn of 1907. He is apparently not a member of the Massachusetts Medical Society.

CASE 3. Child born Oct. 13, 1912. Protargol used at birth. Symptoms observed by the physician Oct. 15 and reported according to law. No trained nurse in attendance; the mother was assisted by a relative. No physician in attendance Oct. 25 to 28. Case transferred to the Eye and Ear Infirmary Oct. 28. Cornea o. d., ulcer and perforation; cornea o. s., hazy and irregular ulcer. Physician, Dr. Z, graduated at Johns Hopkins, 1904, and is a member of the Massachusetts Medical Society.

These cases are luckily unusual in their bad results. But besides these results they have this too usual point in common: no specialist and no nurse was in attendance. Dr. Cheney has ably set forth the specialist's claim.* If we do not quite agree with him, that the spe-

cialist's services should be required by law, we may still support the gist of his contention by insisting, where possible, on an ophthalmologist's advice, and in serious cases, on a specialist's constant attendance. And physicians who hesitate here will, I trust, unanimously support four minimum standards:

1. Routine use of the prophylactic at lying-in hospitals and, with few exceptions, in private practice.

2. Prompt birth returns.

3. Absolute adherence to the reporting law which requires immediate notification of the symptoms of ophthalmia neonatorum, or "babies' sore eyes," and

4. Insistence by the health authorities on constant skilled nursing in all but the lightest cases, the specialist's help at the first suspicion of danger, and if this cannot be had in the parents' home, then prompt transfer of the baby, with mother if possible, to a hospital where expert nursing and special medical care are constantly available.

Where these standards are not upheld we find case after case of children needlessly and carelessly blinded or handicapped. And how do these dingy tragedies occur? In Kipling's phrase—

All along o'dirtiness,
All along o'mess,
All along o'doin' things rather more or less—

Now doing things "rather more or less" is not what reputable physicians tolerate. I, therefore earnestly trust that, throughout the State, they will one and all uphold these standards, so that blindness from ophthalmia neonatorum may become as rare in Massachusetts as blindness from smallpox.

Clinical Department.

HEMANGIOENDOTHELIOMA OF THE TEMPORAL BONE.*

BY FREDERICK L. JACK, M.D., BOSTON.

PATHOLOGICAL REPORT BY

CALVIN B. FAUNCE, JR., M.D., BOSTON.

M. P. Armenian, 46 years old. Entered the Massachusetts Charitable Eye and Ear Infirmary on December 24, 1911.

He had suffered considerable pain and loss of hearing before applying to the Infirmary for relief, and gave the history of a chronic suppurative inflammation involving the right middle ear and the removal of a polypoid growth about eighteen years ago.

Examination revealed a purulent discharge and growth, filling the middle ear cavity. Profuse hemorrhage followed the removal of a portion of a growth, for microscopic examination. The pain in-

* Read at the forty-fifth annual meeting of the American Otological Society, Atlantic City, June 10 and 11, 1912.

* Dr. F. E. Cheney, BOSTON MED. AND SURG. JOUR., Jan. 23, 1913.

creased and at his next appearance, two days later, he was admitted for operation.

His condition changed slightly. Some redness and swelling of the canal wall, with preauricular tenderness was noticed. No mastoid tenderness.

Microscopic Report.—Rare tumor, exact nature undeterminable, due to insufficient amount of material.

On Dec. 29, the radical operation was performed. The bony cortex was found extremely thick and hard. Deep situation of the antrum and much inflamed. Nothing unusual was encountered, until the middle ear cavity was reached. This was found filled with a growth extending inward and upward, nearly three-quarters of the distance to the median line in the petrous bone. Attempts at the removal were followed by such profuse and uncontrollable bleeding and facial twitching, that further operative interference seemed inadvisable. The radical cavity was treated in the usual way.

Patient comfortable for two days, when the pain returned in the ear, together with headache and rising temperature. Leucocytosis, 14,400. From that date his condition grew increasingly worse. Three days later white blood count was 19,800. Lumbar puncture showed turbid spinal fluid growth of fine streptococci. Death occurred on Jan. 7, 1912, nine days after the operation.

PATHOLOGICAL REPORT.*

Autopsy Jan. 8, 1912, at 11 a. m. Head only. Permission for general autopsy not obtainable.

Body is that of a well nourished man, cold, no rigor. Pupils equal 5 mm. in diameter.

There is an open operative wound in the right mastoid region 6 mm. in length. There has been an exenteration of the right mastoid bone. The bone cavity is bathed in white, creamy pus. Apparent exuberant bluish-red granulations protrude from the internal portion of the cavity and from the middle ear.

On removal of the calvarium the pia is seen to be congested. The sulci are everywhere edematous and markedly purulent. There is no hemorrhage. The cerebro-spinal fluid is purulent. The base of brain is covered with fibrinopurulent exudate. The venous sinuses are free. Roof of tympanum is intact; there is no evidence of extension of the purulent inflammation through the remaining petrous bone or the dura.

Projecting from the posterior surface of the petrous bone is a nodular tumor mass, $19\frac{1}{2}$ mm. by $19\frac{1}{2}$ mm. (Fig 1). The tumor projects 8 mm. beyond the inner table, replacing the bone and the dura at this point. The upper margin of the tumor extends over the internal auditory meatus, but does not reach the tentorium. The nodular surface of the tumor is smooth and is reddened and vascularized. It is nowhere adherent to the cerebellum, the opposing surface of which is normal, but for the meningitis.

On sectioning the specimen after decalcification the involvement of the bone is found to be much more extensive than the projecting por-

* From Pathological Laboratory of Massachusetts Charitable Eye and Ear Infirmary.

FIG. 1. (a) Second nerve. (b) Fifth nerve. (c) Seventh-eighth nerves. (d) Tumor.

Hemangioendothelioma of petrous bone (outlined in white) presenting in posterior fossa. The upper margin of the tumor involves the internal auditory meatus.

FIG. 2. Hemangioendothelioma of temporal bone (outlined in black). Showing destruction and invasion of the bone by the tumor.

tion of the tumor seemed to indicate (Figs. 2 and 3). The entire petrous bone is pervaded by the growth, including the labyrinth. The margin of the tumor is fairly sharply defined. The tumor passes entirely through the temporal bone, meeting the soft tissues beneath.

Smears taken from the purulent exudate show streptococci pyogenes.

The whole of the temporal bone, including the tumor and part of sphenoid bone was removed, intact.

One-half of the presenting portion of the tumor was removed and fixed in Zenker's fluid, the remaining part of the tumor and the bone being fixed in Orth's fluid (Miller's fluid plus formalin), to which was added glacial acetic

Fig. 3. (a) Portion of tumor presenting in cranial cavity. (b) Site of operation. Hemangioendothelioma of temporal bone extending from site of operation into the cranial cavity.

Fig. 4. Hemangioendothelioma of the temporal bone, showing proliferating vessels and endothelial cells.

acid to the amount of three per cent. The bone was placed in fresh solution daily for one month. It was then washed in running water for 24 hours and decalcified in a solution of 6% nitric acid in 10% formalin. Some of the tissue was further decalcified in a saturated solution of picric acid. When thoroughly decalcified, the specimen was dehydrated in alcohol and imbedded in celloidin.

The structure of the tumor is best seen in the Zenker fixed specimen, and is strikingly uniform throughout.

The internal surface of the tumor is covered with fibrin and pus; the superficial vessels show numerous purulent thrombi. The infection cannot be traced by direct continuity through the tumor, but that the infection undoubtedly took this course is shown by the infected air cells and medullary spaces passing from the site of the operation and reaching to within a short distance of the inner surface of the growth.

The tumor is made up of actively proliferating small and large vessels, most of which are somewhat larger than capillaries (Fig 4). As a rule the vessels have a very definite connective tissue wall and are lined for the most part by a single layer of endothelial cells. These cells differ from the normal endothelial lining of the vessels, in that they are very large and irregular, and form thick, uneven layers. Certain of the vessels possess more than one layer of these irregular cells. Free, large endothelial cells, many showing signs of degeneration, are found between the vessels.

At the advancing margin of the tumor the tumor cells first appear immediately around the vessels, where they gradually increase in numbers, replacing all the tissue in the medulla, and eventually destroy and replace the bone.

The brain was hardened in formalin for one month and then carefully sectioned. No evidences of metastases were found.

PATHOLOGICAL DIAGNOSIS.

Hemangioendothelioma involving the temporal bone, including the middle and internal ear.
Chronic suppuration of the middle ear.

Operation for exenteration of right mastoid bone.

Streptococcus meningitis by extension through the tumor.

Reports of Societies.

AMERICAN ORTHOPEDIC ASSOCIATION.

THE TWENTY-SIXTH ANNUAL MEETING, HELD AT ATLANTIC CITY, N. J., MAY 30 AND 31 AND JUNE 1, 1912.

(Concluded from page 248.)

DR. V. P. GIBNEY, New York City: We have long since forgotten all about those spindle-shaped femora and tibias. All are of good size now.

DR. J. E. GOLDTHWAIT, Boston, Mass.: All of us are agreed that hip disease is a general disease, and that local treatment is a question of individual experience. Local treatment is certainly no more than protection. I think bone atrophy does not come from disease, but from disuse. At one time I started on a hunt for a lot of cases, that had come to the hospital, in order to see the results of our treatment. I found many that had taken care of themselves and were better than those who were being treated by us. Dr. Morton, of the American Hospital in Paris, said that the results obtained by the direct exposure in a hospital in Switzerland were superior to the sun treatment.

DR. J. F. LORD, Omaha, Neb.: When the condition indicates that the head of the bone is liable to break down, traction is the indication. The amount of traction now used is not adequate to prevent the destructive process and mechanical displacement.