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CEREBELLAR ABSCESS OF OTITIC ORIGIN—AUTOPSY.*

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The importance of prompt and early arrest of purulent conditions in the middle ear is becoming more and more firmly fixed in the mind of every physician. It is only within recent years that anything like success has been attained in the treatment of these conditions. The pathologic and etiologic factors in such cases are being more thoroughly studied and better understood. We are, to-day, better able than ever before to appreciate the extreme gravity of such conditions and now know that a chronic otorrhea—like a pocketful of dynamite—is a standing menace to life instead of, as formerly, being considered a mere inconvenience. We now regard the condition seriously and do not rest satisfied until the discharge is cured.

Nearly 20 per cent. of all ear cases belong to the class of otorrheas. Suppurative processes in the drum cavity readily lead to necrosis and destruction of the bony walls of the tympanum with involvement of mastoid antrum and cells, penetration of lateral sinus and involvement of meninges or brain itself, with abscess formation. Any one with an acute or chronic purulent process in the middle ear is liable to have, with slight warning, a most serious or even fatal illness. Youth being the most frequent age in which the prevailing etiologic conditions and diseases exist, it would be interesting to know the numbers who yearly die as a result of such conditions.

The knowledge of the causal relation which nasopharyngeal diseases bear to suppurative conditions in the middle ear is rendering the treatment much more effective. Hypertrophy of pharyngeal tonsil —adenoids—enlarged tonsils, deviated septum, spurs, enchondroses, polypi and hypertrophied turbinals are the primary causes of more otorrheas than all other causes combined, especially when present during an attack of the acute infectious diseases, as influenza, measles, scarlet fever, diphtheria, etc. The complete removal of these obstructive conditions to respiration, and proper ventilation of the tympanic cavity is often all the treatment that is necesssry if the case is seen early, before any necrotic process has taken place in the tympanic or neighboring structures. At present our German cousins have become extremists and adopt ultraradical measures in all chronic suppurations, by treating such conditions by the mastoid operation. When indicated, it undoubtedly should be done and done promptly, but other and more conservative measures should first be given a fair trial. I would not be understood to say that conservatism is synonymous with good sense at all times. There is a time when delay is dangerous and hesitancy may cost the life of the afflicted. For just such cases as these the radical surgical procedure—tympanomastoid—is necessitated. Radical treatment means the institution of active surgical measures—as much as and no more than is necessary, as against the delay, linger-and-wait methods of the ultraconservatives. My application of radical advances in such conditions begins with the use of surgical good sense at the right time. These surgical measures may begin with the removal of adenoids or other obstruction to free respiration or tympanic drainage. It may mean the incision of a drum at the right time for removal of purulent contents in the drum cavity; it may mean the removal of carious or necrotic ossicles or tissues therein; it may mean the thorough intratympanic washing by antiseptics, or it may (now restricted to this sphere) mean the opening of the mastoid antrum and cells and removal of other tissues, made necessary by involvement in the diseased process—as the tympanic structures, or opening into the cranial cavity for the purpose of evacuating an abscess formation. In spite of our best efforts—medical and surgical—many of these cases follow the course of the inevitable, as is illustrated by the following case, for my interest in and knowledge of which I am indebted to my friend, Dr. Hartwig:

Case 1.—On the evening of February 2 last, I was asked to see, in consultation with Dr. Hartwig, a boy 12 years of age, who had a history as follows: Right ear had been discharging for three years, following convalescence from typhoid fever. Before that time the boy was robust, always well and cheerful. The usual measures for the arrest of the otorrhea were employed by his family physician, with frequent cessation of discharge, to recur at intervals. The boy, since his recovery from typhoid, "has never been himself," as stated by his parents. His former cheerfulness and general good health had gone. Since the attack he became irritable, peevish and illy nourished. About a year ago he had a marked recurrence of his otorrhea, with certain cerebral manifestations, as vomiting, nausea and vertigo, followed by a cessation of the discharge with coma, and, as a consequence, the inevitable—death—was looked for and so thought by his attendant physician. These are the statements of his father. After being given up to die, he took a turn for the better, following an escape of an immense amount of pus from his ear, and in twenty-four hours was up and about—"the ear broke," and has continued well up to a week before I saw him, when Dr. Hartwig was asked to see him, the boy complaining of pain indefinitely located over right side of head, discharge from ear being slight. Dr. Hartwig instituted the usual antiphlogistic measures—washing ear, insufflation of antiseptic powders, sedatives, etc., but in spite of these the pain continued and when I saw him on the evening of February 2 his irritability and pain were marked.

A careful examination revealed a small perforation at the anterior inferior quadrant, low down, little discharge, posterior segment of drum whitish and sodden looking, canal free except for slight swelling and redness anterior inferiorly. There was no redness nor tenderness over mastoid antrum or tip; temperature 99, pulse 72. The advisability of opening his mastoid for the relief of the continued pain, which would yield to no therapeutic measures, was considered, but we concluded to wait and watch until the next day, in the meantime employing sedatives, aconite, and ice-packs to the mastoid. On the following day his pain still continued, with no sleep at night; no other symptoms were present; eye-grounds were normal; speech was unaltered, intellect clear, no motor or sensory paralysis, no inco-ordination, no nausea or vomiting, no vertigo. On the afternoon of February 3 we prepared the boy for opening of the mastoid antrum. The boy was chloroformed and prepared in the usual way for such operations. On chiseling into the mastoid we found it dense, the antrum (small) being reached at a depth of half an inch. A small amount of cholesteatomatous material was removed, the post superior wall of the meatus was partially knocked down and a curette passed into the tympanic cavity. Free communication was established between the external meatus and antrum, manifested by syringing through the antrum into tympanic cavity and out at external meatus, and vice versa. The wound was dressed and the boy put to bed, followed by a good night's rest and cessation of pain on the following day. His temperature was normal, pulse slightly subnormal, varying from 60 to 65; appetite fair; no other phenomena except apathy with an occasional restless and irritable spell.

Dr. Hartwig watched the case daily from February 3 until February 7; the boy not showing signs of improvement he asked me to look at him, which I did on the evening of Febru-

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ary 7, and found him irritable, yawning frequently, pulse 66, temperature normal, pupils slightly dilated, light intolerant; no congestion of eye-ground; no muscular inco-ordination; in fact nothing alarming except that he apparently was going down hill, losing flesh and strength. The wound was dressed and looked healthy, with no pus formation. On the ninth day after operation he was eating plentifully and singing songs but still in bed, and Dr. Hartwig reported his condition favorable and asked me to go to see the case on the tenth day, as he (Dr. Hartwig) was ill and could not go. I did so, but found the boy semiconscious, marked retraction of head, pupils dilated, eye-ground normal, temperature normal, pulse 60, restless and apathetic. I suggested to the parent the serious character of the boy's condition and that his trouble was in the brain, suspecting either a cerebellar abscess or an extradural abscess—the absence of temperature, rigors and chills excluding sinus thrombosis and meningitis. I advised further operative intervention and consent was granted. On returning to Dr. Hartwig's office, he asked me to take the case, owing to his continued illness, and do what I thought best. The next day, in company with Drs. Harlan and Crouch, we attempted to reach the home of the sick boy, to explore, but the "blizzard" made it impossible and so we had to desist. The father reported that the boy had died—that is on the eleventh day after operation. An hour previous to death the boy was rational and ate a dinner consisting of soup, milk and eggs and passed away quietly without a convulsion.

The parents consented to an autopsy, which was done two days later in company with Drs. Harlan and Crouch. We found, on opening the skull, the meninges and sinuses normal except a small area of meninges at outer border of cerebellar lobe where the meninges were necrotic, and a communication with a large pus cavity in the right lobe. I should say two ounces of pus escaped therefrom on removal of the brain from its cavity by the act of handling the abscess sac, being so fragile and readily ruptured. I regret that we did not secure a culture, as it might have thrown light upon the case, possibly revealing the nature of the infection, whether typhoid, Eberth's bacillus or ordinary pus cocci infection. On examining the skull we found the avenue of extension not via the mastoid antrum through the lateral sinus groove, but that the necrotic process had made an opening 2 mm. in diameter through the tympanic wall (postero-internal) anterior to and above the lateral sinus, thus invading the cerebellum, the lateral sinus escaping.

The abscess capsule was found very thick, giving evidence of different stages of inflammatory activity, thus explaining his miraculous recovery of a year ago. Doubtless at that time he had an encapsulated cerebellar abscess which emptied itself spontaneously through the carious opening into the middle ear, the pus draining through external auditory meatus and recovery ensued, the last attack being a reinfection of his cerebellum, possibly by occlusion of the opening, preventing free drainage.

The case is interesting in many particulars, as not only indicating the possible menace to life which a neglected otorrhea entails, but also the symptomatic variability in cerebral complications of the same. The typic picture of any disease in medicine is unusual. Certainly the classic picture of cerebellar abscess in this was absent. The full complex of symptoms necessary for a perfectly localized diagnosis was present at no time, except possibly a few hours before his death; the usual complete complex symptoms to be looked for in cerebral abscess, and especially in cerebellar abscesses, being irritability, pain—almost constant—nausea, vomiting, the discharge from the ear stops or is scanty, lowering of pulse-rate, temperature subnormal or slightly above normal (rare cases have been reported where the pulse-rate and temperature were above normal).

Aphasia in otitis media of left side and in a right-handed person would point to abscess in the temporo-sphenoidal lobe. Inflammation of the optic nerve may or may not be present. It is more frequent in cerebellar than temporosphenoidal abscess.

Our diagnosis then must be founded upon the complex of symptoms, viz.: severe headache, nausea, vomiting, vertigo, a staggering gait, facial paralysis, choked discs, with retinitis, slow pulse, temperature low, slowing of the respiration, Cheyne-Stokes respiration, yawning, slowness of cerebration and general apathy, irritability, intolerance of light, delirium, rigidity of the neck, motor or sensory paralysis. When complications exist, as sinus thromboses and leptomeningitis, other symptoms supervene to make the diagnosis difficult. In sinus thromboses, rigors and chills with high temperature and increased heart action are almost invariably present, with tenderness along the course of the jugular vein; in leptomeningitis the high temperature, rapid pulse, general irritability and marked acuteness of special senses. A cerebellar abscess usually terminates in death when operative procedures are not used. The abscess contents escape and a new inflammatory action is set up. Abscesses have become encapsulated and remained quiescent for years without giving rise to serious trouble, but such cases are rare. We should never anticipate such a result. Our duty is to operate early if a successful result is to be hoped for. The time to operate is when we have made our differential diagnosis—a deep problem and sometimes a very speculative one.

The percentage of recoveries from operation is not definitely known, but certain it is that unless we use surgical intervention all such cases will die sooner or later.

The uncertainties and difficulties in brain surgery are not so much those of technic or of bad after-effects, but occur at the outset, and with our present diagnostic and localizing methods may be impossible of improvement.

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THE DOCTOR AS A POLITICIAN.

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The doctor is virtually a political nonentity. In our legislative halls we are practically without representation, and the few that are engaged in politics are really not pursuing the practice of medicine. The rank and file of physicians are not, as a rule, particularly concerned in the solution of problems calculated to affect medicine politically. Is it to be wondered at, then, that we fail to gain for these numerous and all-important questions in which the profession is deeply interested that fair consideration which they desire?

There exists a class in the medical profession who believe medicine and politics entirely incompatible, and consider politics so corrupt that no honest man can have anything to do with it without being contaminated thereby, or that only the office-seeker is benefited by the elections which occur from time to time; therefore, he must take care of his own interests as best he can. It can not be denied as we approach the consideration of the proposition that politics is corrupt, that there are many things done under the guise of legislation that might better be left undone, and our executive officers far too often fail to do their duty. But because a few of our officials are corrupt, it does not excuse us from taking part in the elections. It is a mistaken idea that by absenting ourselves from the primaries and elections we can bring about needed reforms, and we may flatter ourselves that by staying at home we can escape the touch of politics. The

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