laxed when totally cut off from the spinal cord, but its contractions are more likely to be irregular and incomplete.

The observation of the case reported briefly in this paper serves to substantiate many of the points to which allusion has been made, and demonstrates from the standpoint of a unique pathological lesion that uterine contractions may occur without pain; that the fetus may be carried far on its way, if not wholly expelled, by a uterus separated from its central connections and without the aid of the abdominal muscles; and that its final contraction after the expulsion of the placenta may be complete and satisfactory, precluding the likelihood of post-partum hemorrhage.

Clinical Department.

"A CASE OF CHRONIC OTITIS MEDIA, HEMORRHAGE INTO THE EXTERNAL AUDITORY CANAL, PERFORATION OF THE WALL OF PHARYNX, WITH FATAL HEMORRHAGE FROM THE JUGULAR VEIN.*

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J. O., two and one-half years old, was first seen at the Massachusetts Charitable Eye and Ear Infirmary on Jan. 8, 1907, when the following history was obtained. The patient had never had any of the diseases of childhood, or any ear trouble prior to the present attack. For two weeks she had been fretful and evidently in pain. A discharge of pus from the right ear had been noticed for several days, and a swelling postaural for nearly a week. Considerable coagulated blood was found in the right meatus. Over the mastoid tip, extending about one inch below and one and one-half inches posteriorly, was a large fluctuating swelling about the size of a tangerine, tender on pressure. About two hours following admission to the ward the child was taken with severe hemorrhage from the mouth and nose. When the House Surgeon arrived the child was not breathing and was exsanguinated. Clots were found in the mouth and nares, with signs of vomitus on clothing. Adrenalin was given subcutaneously and normal salt solution, together with artificial respiration, but without avail.

Autopsy by Dr. Verhoeff, nineteen hours after death, head only. Body that of a fairly nourished female child. Slight rigor mortis. Lividity of dependent parts. Both nostrils and right external auditory canal are filled with clotted blood. Below and slightly behind the meatus there is a swelling about the size of an olive, over which the skin shows ecchymosis. Meninges and brain are normal, no evidences of tuberculosis. The venous sinuses are free, including the right lateral sinus and bulb. The whole temporal bone, with a large amount of the soft tissues beneath it, including a portion of the wall of the pharynx, removed and hardened forty-eight hours in 10% formalin. A stream of water can be forced through the carotid canal without any of it finding its way into the tympanum. The soft tissues beneath the bone, which contain the carotid artery and jugular vein, are infiltrated with blood from a large hemorrhagic extravasation. This is in communication with the pharynx a short distance below the mouth of the Eustachian tube. It also extends outward to the angle of the jaw, undermines the subcutaneous tissue, forms the swelling already mentioned and communicates with the lumen of the external auditory canal at the bony margin of the latter. The tympanic membrane is now intact, but is retracted and united to the promontory, evidently as the result of an old perforation. The tympanic cavity and Eustachian tube contain a large amount of exudate, but are free from blood. The ossicles are *in situ*. Attached to the wall of the tympanum are several small polyps. The attic and mastoid cells are filled with exudate, but the bony tissue is apparently not necrotic. The lining of the carotid artery, in its nearest vicinity to the tympanum and Eustachian tube, is smooth and intact.

Histological examination (Decalcification in 5% nitric acid, embedding in celloidin): The wall of the external auditory canal shows a marked inflammatory reaction and is giving off an exudation of pus cells. The tympanum shows the appearance characteristic of chronic suppurative otitis media. The submucosa is markedly infiltrated with chronic inflammatory cells, and the free exudate consists chiefly of serum and pus cells. The lining epithelium is comparatively normal. The polyps are found to consist of edematous connective tissue only slightly infiltrated with inflammatory cells. The air spaces leading out from the tympanic cavity are filled with seropurulent exudate. The medullary spaces of the surrounding bone show an infiltration with chronic inflammatory cells, among which plasma cells largely predominate, and occasional foci of pus cells. The internal ear is normal. The carotid artery itself is normal, but its sheath shows a marked chronic inflammatory reaction which extends as far as the first bend in the bony canal, but which is most marked at the entrance of the latter. The sheath of the artery for a short distance is also infiltrated with blood which has forced its way from the large hemorrhage beneath the temporal bone. The soft tissues in which this hemorrhage has taken place are involved in a formation of granulation tissue in which occur large areas of pus cells. The wall of the jugular vein, which passes through this abscess, is completely necrotic, lined with purulent thrombi and in places perforated. Higher up, where the vein is in relation with the bone, its wall is normal. Sections of the abscess beneath the temporal bone, stained by the Gram method, show numerous streptococci occurring in short chains and pairs. No other bacteria are to be seen.

Diagnosis. — Chronic suppurative otitis media, abscess beneath temporal bone, due to streptococcus pyogenes. Perforation of internal jugular vein. Infected hematoma. Hemorrhage into external auditory canal. Perforation of the wall of the pharnyx, with fatal hemorrhage from internal jugular vein.

BIBLIOGRAPHY.

Hessler: Arch. für Otol., vol. xviii.
Sutphen: Zeitschr. für Otol., vol. xiii.
Baizeau: Gaz. des Hôp., 1881–88.
Choyan: Arch. Gén. de Méd., 1866.
Grossmann: Casuist, Beitr. z. Ophth. und Otiatr. Rest, 1879.
Busch, Santesson. Semidtche Jahrb., 1862.
Pilz: Dissert. inaugur., Berlin, 1865.
Sokolosky: Centralbl. für Chir., 1881.
Toynbee: Dis. of the Ear, 1860.
Prescott-Hewett: Arch. Gén. de Méd., vol. xiv, 1837.
Broca-Jolly: Arch. de Méd., 1866.
Hermann: Wien. Med. Wochenschr., 1867.
Ward: Transactions of the Pathological Society, 1846.
Dennee: Bull. de l'Acad., 1878.

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