which treats of it will bear as its motto the eloquent *in memoriam*, or the terse and homely *hic jacet*. May we not even indulge the belief that the next edition of the work before us will be devoted, not to the resurrection of a defunct hypothesis, but to the elaboration of its epitaph?

J. N. M.

ART. XXXI.—*Pulsating Proptosis and Elastic Tumor of Left Orbit consequent upon a Trauma of the Skull—Ligation of Left Common Carotid*. By ROBERT SATTLER, M.D., Ophthalmic Surgeon to the Cincinnati Hospital. Pamphlet, 12mo. pp. 24. New York, 1885.

In this *brochure*, which is a reprint from the *N. Y. Medical Record* of June 13 and 20, 1885, Dr. Sattler reports a most interesting case of pulsating proptosis, and gives the results of an analysis of all the cases reported up to the present time with especial regard to their pathology, symptoms, and treatment. As this affection is frequently the result of trauma of a part singularly exposed to traumatic influences, it may not be uninteresting to give a *résumé* of Dr. Sattler's extended studies upon this subject, with a view to formulating some ideas in reference to treatment.

The earlier cases were described under a great variety of names by various reporters, these names designating either a theoretic pathological condition, or the clinical features of the disease. Among these names we find some eminently descriptive of the affection, but too cumbersome for general use; such as "rupture of an aneurismal dilatation into the cavernous sinus," and "rupture of the internal carotid and arterio-venous communication within the cavernous sinus." Other designations are: aneurism by anastomosis, aneurism of the ophthalmic artery, erectile tumor of the orbit, vascular protrusion of the globe, pulsating tumor of the orbit, and pulsating exophthalmus. In this connection, however, it will be seen that it is impossible to bestow upon the clinical features of these cases one name based upon that usually most satisfactory and most scientific classification—the pathological condition; for, as we pursue our studies, we will find that not one alone, but several lesions are capable of producing similar or nearly identical symptoms.

The literature of the subject refers to 113 cases exclusive of the case reported, making a total of 114 cases up to the present time. Of these 26 proved fatal, or, perhaps it were better to say, died under observation, as an intercurrent disease was the cause of death in many cases. Post-mortem examinations were held in 19 cases, but the reports of some of the autopsies are not so satisfactory as might be wished. We find recorded that "unmistakable rupture of the internal carotid and communication with the cavernous sinus was discovered in four cases, all traumatic."

In five additional cases arterio-venous communication was most probable. Only three unquestionable cases of aneurism of the ophthalmic artery are found in the post-mortem records.

A tumor of the orbit was found in three cases, and Dr. Sattler adds one to "the large list of so-called 'pulsating cancer of the orbit,' cited by Noyes, by a case of his own, verified by microscopic examination and a

subsequent autopsy." Three cases of spontaneous rupture of an aneurismal dilatation of the internal carotid into the cavernous sinus are described. One case is reported and described as a "thrombosis of the cavernous and petrosal sinuses" by Bowman-Hulke.

Thus it will be seen that in more than fifty per cent. (12 out of 19) of the cases, the established or most highly probable lesion was "rupture, large or small, traumatic or spontaneous, of the internal carotid, communication with and arterial propulsion into the cavernous sinus and its tributaries."

Aneurism by anastomosis, under which term the first case was described by Travers in 1809, has never been confirmed by post-mortem examination.

The pathology of the affection is the same as that of aneurismal varix or varicose aneurism situated in any other part of the body. According to the extent of the communication between the artery and vein there will be impediment to, arrest or even a reversal of the venous current; and the "back-track evils" resulting from an interference with the venous flow will be more or less pronounced. This may vary from a mere venous plethora to the formation of masses of dilated, tortuous, pulsating vessels in the region drained by the cavernous sinus. The dilatation of vessels and the formation of clots, with the constant deposit of fresh laminae, lead to pressure symptoms on the nerves traversing the walls of the sinus—the third, the fourth, the sixth, and the ophthalmic division of the fifth. Then come disturbances to the intraocular circulation. The symptoms in a case of this kind are such as might be inferred from a knowledge of the pathology. They are: A wound-like elevation of the palpebral, temporal, nasal, and frontal regions, with an increased thickness of the lids, and an injection and tortuosity of the cutaneous, subcutaneous, and conjunctival veins, chemosis, congestion of the choroid and oedema of the retina; "bossy protuberances," often pulsating visibly and most frequently situated at the upper and inner portion of the orbital opening between the globe and the bony margin of the orbit; proptosis or displacement and pulsation of the globe; a feeling of fullness or pain, disturbances of vision in consequence of ptosis, paralysis of the extrinsic muscles, or disturbance of the choroidal and retinal circulation. Sometimes the pressure symptoms in relation to the nerves are very marked, producing sluggish pupillary movements, myosis, mydriasis, and paresis or paralysis of the motor and sensory nerves of the eye. A marked feature of almost (?) invariable occurrence has been the distressing intracranial noises heard by the patient. These are variously likened to whistling, puffing, the noise of steam escaping from an exhaust pipe, the rattling of a wagon load of iron, purring, cooing, etc.

In concluding his article Dr. Sattler gives an interesting and graphic account of his own case. The symptoms coincide with the classical descriptions given of the affection in those cases which were verified by post-mortem examination. In the treatment conservative measures were first adopted. A very probable case of aneurism of the ophthalmic artery, under the care of Dr. E. Williams, having been successfully treated by means of instrumental compression, the use of arterial sedatives and compression, digital and instrumental, was first resorted to, but without any perceptible modification of the symptoms. The patient was kept in bed and veratrum viride, aconite, and digitalis were administered in increasing doses. Digital compression kept up for fourteen hours by relays of students, and subse-

quently instrumental compression continued for eight hours were tried without avail. More radical measures were then appealed to and ligation of the left common carotid performed. The results of ligation had been peculiarly happy, and in this case promised well as a prospect of relief if not of cure. "Five weeks after the operation the patient was discharged. At this time the following points were noted: Almost complete reduction of the proptosis. Inability to produce pulsation of the globe. Marked improvement in sight, $V = 0.9$, with -0.75 Oph. Diminution of the distressing noises and absence of the feeling of distension and discomfort about the orbit."

About four months later the patient returned, presenting himself in about the same condition as when discharged. He was willing to submit himself to further treatment if it were deemed advisable. Further surgical interference, however, was advised against.

Cases heretofore reported in which ligation was resorted to have been recorded as fatal cases or as cures with the exception of one, Roux's case, "in which no effect was produced upon the disease." This last case of Dr. Sattler's may be regarded as one in which, though a positive cure was not effected, very marked relief was afforded.

The future history of this case would be of interest to note as regards the maintenance, advance, or recession of the disease. It is interesting too to speculate upon the effect of tying the right carotid, or injecting what remained of the pulsating tumors with an irritating solution, or of attempting galvano-puncture.

Enough is now known, however, of the effects of compression and ligation for it to be laid down as a rule almost invariable in its application that resort should be had in the first place to the first of these, and, this failing after a fair trial to relieve or alleviate the symptoms, that ligation of the common carotid should be practised. Ligation of the other carotid, galvano-puncture, etc. must depend upon too many conditions that surround each case to permit us to carry the dictum concerning treatment further than this.

C. H. C.

ART. XXXII.—*St. Bartholomew's Hospital Reports*. Edited by W. S. CHURCH, M.D., and JOHN LANGTON, F.R.C.S. Vol. XX. 8vo. pp. xxxi., 35, 382. *With an Appendix including Statistical Tables of the Patients under Treatment in the Wards of the Hospital during 1883*. 8vo. pp. xxxii., 35, 382, 97. London: Smith, Elder & Co., 1884.

THE *St. Bartholomew's Hospital Reports* for 1884 contains a most interesting array of papers, of which those on medical subjects largely preponderate over those strictly surgical. A feature also of this volume is the reprint of an old copy of the *Orders and Ordinances for the Better Government of the Hospital of Bartholomew the Lesse*, which was printed in 1652, and which furnishes very entertaining and instructive reading.

The volume opens with a paper on *The Amount of Carbonic Acid in London Air*, contributed by Dr. W. T. RUSSELL. Whilst the application of this paper is one strictly local, Dr. Russell gives a short description of the methods of analysis, and appends tables and charts which interest the general reader.