

rather in Dr Douglass's account of it, than his own; and we think, with Dr Yelloly, that this is very much to be attributed to the "reliance which has been placed on Dr Douglass's judgment and opportunities of observation; to the ready credence usually given to confident assertions of historical facts; and to the disinclination which there is either to ascertain, or to investigate, the evidence on which such facts may depend."

ART. IV.—*Case of Extensive Aneurism by Anastomosis in a child ten months old, involving the branches of the Temporal and posterior Auricular Arteries, treated successfully by the Twisted Suture.* By J. MACLACHLAN, M. D. Assistant-Surgeon 79th Regiment.

PROFESSOR LALLEMAND of Montpellier, in a paper on erectile tumours, published in the Archives Générales for May 1835, gives the history of three cases which he treated with perfect success by incision and the twisted suture. Finding that the irritation occasioned by the needles, contributed materially to the obliteration of the tumours, he abandoned the preliminary incision in a fourth case. The tumour was traversed with 120 needles. In rather less than three months, the adhesive inflammation had converted it like a fibrous tissue, and the cure was complete. This was in December 1834. Since then the practice has been resorted to by a few individuals in this country, but the details of the cases do not appear to have been given to the public.* In France it is more generally employed, and in a paper entitled *Recherches et Observations Cliniques sur les Tumeurs Erectiles*, by A. E. Bouchacourt, in the Revue Médicale for August 1838, a case is related in which an erectile tumour of the size of two fists ("de la grosseur de deux poings,") occupying the left cheek of a young countryman, 18 years of age, surrounded and traversed by large veins, was treated in this manner. On the 12th April 1836, 40 needles were introduced, and on the 9th May following 14 more. The cure was successful. In the following case the practice succeeded beyond my most sanguine expectation, and when the age of the subject, and the nature and extent of the tumour, are taken into consideration, it is not only interesting but highly important and truly satisfactory.

CASE.—A. M., a remarkably fine, stout, healthy, female twin child, belonging to a serjeant of the regiment, aged on the 2d April 1838, ten months, was observed, a fortnight after birth, to have on the right temple a small reddish flat mark, not much larger than

* Of this mode of curing erectile tumours by M. Lallemand, a case is recorded in the 45th volume of this Journal, at page 556.

a pin-head. The discoloration slowly spread, and gradually rose above the surface. The child was brought to me in the fifth month. At that period there was in front of the right ear, immediately above the zygoma, a tumour possessing the character of aneurism by anastomosis, extending upwards for about an inch, and being half that in breadth. There were several small flat livid spots behind the ear and about the cartilages. In two months the tumour had rapidly increased in every direction. During that time the child had been seen occasionally by my friend Staff-surgeon Mahony. It had ulcerated superficially behind the ear, and there was a copious discharge of purulent matter from the external meatus. Having attained certain dimensions, it appeared to remain stationary. For several months prior to the 2d April, there had been no perceptible increase. The parts behind the ear were, however, constantly breaking out into superficial ulcerated points, from which occasionally there was an oozing of arterial blood.

On the 2d of April 1838, the tumour presented the following characters. The tumour appeared chiefly to be arterial. A few enlarged veins encircled and ran through it; but it seemed essentially to consist in an enlargement in size, if not in number, of the branches of the superficial temporal and posterior auricular arteries. Commencing at the root of the zygomatic process, it proceeded directly upwards, reaching nearly the anterior fontanelle, and terminating in a nuckle-like eminence. This, the temporal portion, measured three inches and a-half in length; at its origin it was rather more than an inch in breadth, and, when distended, it rose throughout fully three-fourths of an inch above the surface. The whole of the figured parts of the ear were either of a livid or bright strawberry colour, little if at all elevated in front, but in the angle behind forming a livid flaccid swelling. Immediately in front of the mastoid process, this was of the size of a small filbert. From this point it took a semicircular course backwards, following the direction of a superficial branch of the posterior auricular artery, and extending upwards of two inches. Towards the angle of the lower jaw there was a diffused subcutaneous tumefaction of a bluish cast. The whole of the tumour, with this exception, was of a deep strawberry colour, mammillated, brightening as it distended, and with a bluish tinge here and there. The least exertion in crying produced a remarkable increase in the temporal and occipital portions, and there was a constant thrilling felt on applying the fingers to the temple. There were also two detached, small, circular, flat nævi close upon the orbit, and two or three others of the same nature above the ear on this side, figured in the plate. (Pl. IV.)

The mother was extremely averse to any operation. I had tried compression upon the temporal portion, though, for want of a proper apparatus, very ineffectually, and the application of ice and astrin-

gents, as was to have been expected, without the least benefit. On strongly representing to her the great danger of farther delay, and finding my opinion corroborated by others, she at last reluctantly consented to an operation. A consultation, consisting of Sir George Ballingall; Staff-surgeon Mahony; Surgeon Lorimer, 79th Regiment; Mr Fergusson, Surgeon, Royal Infirmity; and Dr Duncan of Edinburgh, unanimously recommended a trial of the twisted suture. Accordingly, on the 2d April 1838, four needles were introduced at twelve o'clock, in the presence of these gentlemen. The first traversed a space of an inch and-a-half in front of the ear, immediately above the zygoma, the intention being, if practicable, to get under the root of the temporal artery. No alteration, however, followed; on the contrary, the whole tumour became enormously distended by the cries and efforts of the child. The second needle was pushed through half an inch from the termination of this portion of the tumour, so as to cut off any communication with the opposite side. The third was introduced parallel with, and half an inch from, the first, this part having enlarged considerably on twisting the thread round the first needle. The fourth was inserted immediately in front of the mastoid process, close to the lobule of the ear, embracing, apparently, the posterior auricular artery. This suture was instantly followed by a most satisfactory diminution of the tumour occupying the posterior part of the helix, as well as a change of colour in the concha and *meatus externus*. The child was soon quieted; and in half an hour after it fell into a sound sleep, interrupted momentarily by startings. Between three and four o'clock it was up and lively. It slept sound during the night.

4th April, Third day.—The child was seen regularly twice a-day since the second, and did not appear to have suffered the least inconvenience from the needles. The temporal portion of tumour appeared to be more flaccid, and of a deeper blue. The mastoideal and occipital portions were stationary. The child's health was undisturbed, and the needles were firm.

6th April, Fifth day.—The needle behind the ear was removed to-day, there being slight discharge from the punctures, with surrounding excoriation, the tumefied parts overlapping and being irritated by it. The remainder were firm. In the neighbourhood of excoriation were several hard nodules, occasioned by effused fibrin, and resembling an external hæmorrhoid. The posterior part of the ear, as also the meatus, were already much reduced. Four more needles were introduced, the situation of which are pointed out in the accompanying plate. On this occasion, waxed thick purse-silk was employed, as being less likely to cut the skin. Several turns of the silk were made over the parts isolated by the needles, by crossing it from one needle to

the other. The child cried less, and fell into a sound sleep soon after the operation.

7th April, Sixth day.—Health continued undisturbed. The first and third needles introduced on the second were withdrawn to-day, though firmly fixed. A drop of blood followed the removal of the first. The silk has been allowed to remain. Excoriation behind much deeper.—A weak solution of the sulphate of zinc to be applied.

8th April, Seventh day.—The temporal portion of tumour was less red. The part anterior to the ear was firm, semitransparent, and of a very pale-blue colour, evidently resulting from effused fibrin. The remaining needle was introduced on the 2d. The one near the termination of the temporal portion, the second inserted, was removed to-day. Neither discharge nor ulceration had taken place at either of the points. The child has been lively and in high spirits. Excoriation discharging copiously, but not extending.

11th, The remaining needles were removed, and found slightly oxidized. Behind the ear ulceration is rather deeper, and yesterday the discharge was discoloured with blood. From the surface of the tumour, immediately above the zygoma, issued a slight sanious and purulent discharge, but the parts underneath felt firm. On withdrawing the seventh needle, a drop of scarlet blood followed. The parts embraced by the silk are white, but not ulcerated.

The child was daily visited since last report. Its health continued undisturbed, and there appeared to be a decrease in the whole tumour operated upon; at all events, it was not nearly so much elevated when the child cries, nor is it so bright.

13th, Discharge from ulcerated parts was much increased, and the tract of the first needle in front of the ear was deeper. The whole tumour above this was also superficially ulcerated and discharging thin ichor. The subjacent parts continued firm, and, excepting when the tumour is touched, the child appeared to be free from pain.

In rather less than three weeks from this date the ulcerations had healed under common applications, the solution of the sulphate of zinc, or the white oxyd of zinc ointment. The tumour gradually disappeared, leaving a firm fibrous texture of a whitish colour indented with the tract of the needles, and very closely resembling a superficial burn. That portion behind the ear of a crescentic form, retained for some time its brightness. I was desirous of passing under and through it two or three needles; but the mother, who all along appeared to view the measure adopted as an experiment, offered so many objections that my intention was not carried into effect. This I scarcely regret. At the period I am writing (30th November 1838,) the skin had nearly acquired its natural colour, interspersed only in front and behind the ear with some little red points. The previous extent of the tumour could now

hardly be traced, the hair is growing over it, and, as the child advances in years, that portion only in front of the ear will be exposed. There is still a small flaccid livid swelling, rather larger than a pea, in the loose integuments in front of the mastoid process, not, however, under the influence of the circulation; and the mother says it is decreasing.

It would be difficult to find a more satisfactory or successful case than the above. In this instance, at least, Lallemand's method effected all that could be desired. It is obvious that no other could have been attended with so little risk. Excision was out of the question; the boldest operator, and the most dexterous dissector, would scarcely have attempted the knife. Ligature of the carotid artery was a measure uncertain in result. Although Mr Travers succeeded by tying the carotid in a case of aneurism by anastomosis in the orbit, the very free inosculation in the scalp appears to be unfavourable when the tumour is situated there; and it has been remarked by Mr Phillips,* "that ligature of the carotid has never succeeded in one of the cases in which it has been employed by Pellétan, Mussey, and Wilhaume, for the cure of erectile tumours affecting the temporal fossa. The case related by Dr Mussey, in the American Journal of Medical Sciences, February 1830, and transcribed in the London Medical Gazette, Vol. vi. p. 77, in which he tied both primitive carotids for a large aneurism by anastomosis, on the vertex, and had in six weeks after to extirpate the tumour, is not in favour of the ligature. In a case operated upon by Dupuytren also, in which he tied the carotid for a large nævus situated about the ear, and including the whole texture of the surrounding parts, the operation was equally unsuccessful. It appears to be more certain in cylindroid dilation of the arteries. Mr Syme and others have recorded cases in which they succeeded; but, as is observed by Lawrence, "tying the arteries, or the main trunks of the vessels which supply the part of the body in which nævi are situated, cannot, according to our present experience, be much relied on." Extirpation and ligature of the carotid being rejected, the only remaining method that appeared at all applicable was that proposed and executed by Mr Fawdington of Manchester, the seton; but the purely arterial nature of the tumour seemed to render it hazardous, and the needles were employed, as being less likely to be followed by hæmorrhage.

A remarkable circumstance in the history of this case is, that very few needles, eight only, were sufficient to obliterate the tumour. The repeated ulcerations behind the ear seemed to be an effort of nature to destroy the disease, requiring only a little

* London Med. Gaz. Vol. xii.

assistance from art to perfect the cure. Another point worthy of remark, was the total absence of constitutional irritation from the needles. Aware of the danger of punctured wounds in the scalp, I was rather apprehensive of an attack of erysipelas; and, as the needle behind the ear must have embraced some branches of the *portio dura*, there were grounds for anticipating other disagreeable consequences. However, no constitutional effect whatever followed the insertion of the needles on either days. The operation was completed without the loss of a single drop of blood; and the tumour was removed with little or no deformity. These, then, appear to be the principal advantages of the treatment of aneurism by anastomosis, or *nævi*, by the twisted suture; viz. simplicity; little or no pain in its performance; little or no constitutional disturbance; little deformity, perhaps less, if necessary, except the seton, than by any other method; and little or no risk of hæmorrhage. On this last point Lallemand remarks, "the fear of hæmorrhage is groundless. Immediately after the needle is introduced it fills the wound it has made, and in a very short time inflammation changes the nature of the surfaces divided, and hæmorrhage becomes impossible."

I employed fine darning-needles, previously prepared with wax-heads, to handle them by. Although Lallemand appears to have used needles, he recommends pins, such as are used for transfixing insects, as being more easily cut or broken off than sewing-needles. He considers thread unnecessary;—"it prolongs the operation, does not increase the inflammation, nor is it necessary to prevent hæmorrhage." It appears to me, however, to assist the progress of the cure; by compressing the vessels, it induces adhesive inflammation in their sides; they are more readily obliterated, and the nature of the tumour is essentially changed, though the irritation occasioned by the presence of the needles seems to be the chief source of benefit.

Successful, however, as the twisted suture has been in the case of *nævi* and aneurism by anastomosis, like every other method employed, it has occasionally failed. In two cases seen by M. Bouchacourt, the twisted suture practised twice was without benefit; yet it is well deserving a trial. In a considerable majority it will be found to answer; and it is less objectionable than most plans.

Explanation of the Plate (IV.)

The Plate exhibits the extent and form of the tumour, and the situation and relative positions of the needle.

*Richmond Barracks,
Dublin, 30th November 1838.*

DR MACLACHLAN'S CASE.

