the mouth, it was found that the symphysis of the lower jaw was not only thrown an eighth of an inch towards the right, but formed an angle, opening downwards, of eleven degrees with the mesial line of the face (Fig. 3). It will be seen by reference to this woodcut that the lower teeth from the first temporary molar on the left side to the central incisor on the right, although in a quite normal position as regards the lower jaw, leave a space of three-sixteenths of an inch (at its widest) between their edges and the upper teeth.

It is evident that if the evolution of one temporal bone does not proceed *pari passu* with its fellow, in an otherwise well-developed skull, the glenoid fossa on the faulty side will stand at a higher level and rather internal to the normal position. This condition is somewhat similar in its results to atrophy, but as it is arrived at by a different process, I have applied to it the term "asyntrophy," as, in my opinion, it at once expresses the cause and implies this as one of the defects. Such a change in the level and situation of the glenoid fossa will, of course, account for the altered position of the inferior maxilla. The following reasoning is, I think, correct of bones in general: If an asyntrophic bone, articulating on *one* side only, be carefully examined, it is found that the altered position of any given point from its normal situation is in arithmetical proportion to its distance from its *articulating* surface. When, however, it is articulated on *two* or *more* sides, the same law still obtains, though complicated in its operation owing to its acting in more than one direction, and being occasionally modified by muscular force, visceral thrust, or chemical change. The flattening of the cheek in this case seems to be *entirely* due to the altered position of the lower jaw-bone.

The family history of this child is interesting and important. The mother states that when she was three months advanced in pregnancy, her brother quarrelled with the father of the child (owing to some delay in the marriage ceremony), and struck him a severe blow with the fist behind the right ear, causing it to bleed; whereupon the mother screamed out, "Oh, my —, his poor ear," at the same time putting her hand on her right ear, and pressing it forwards. She says she carried the child the full time, and that it was "frightfully cross" for the first six months, on which account she freely administered "sleeping stuffs."

The father "caught cold" in his right ear nine years ago, whilst on a voyage from Australia, and has been quite deaf on that side ever since, the ear frequently discharging.

One of the mother's sisters, aged thirty-two, suffers from right hemiplegia and frequent recurring epileptic fits, and another has a child, aged five, with spinal curvature and enlarged epiphyses.

HYSTERICAL HEMIANÆSTHESIA OF THE LEFT SIDE; DEFECTIVE ELECTRICAL EXCITABILITY OF THE RIGHT CEREBRAL HEMISPHERE.

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THE result of an electrical examination in a case of hysterical hemianæsthesia at present under my care in hospital appears of sufficient interest to merit record. The patient, a girl thirteen years old, was admitted on account of contracture of the left arm; the thumb and forefinger being flexed upon the palm, the hand flexed at the wrist, and the forearm at the elbow, the muscles rigid. The condition had supervened upon a great moral shock (the death of her father) a fortnight before. It was discovered on examination by Mr. Broster, resident medical officer, that there was anæsthesia of the left half of the body.

When I saw the girl, six days after her admission into the ward, the contracture had entirely disappeared, but there seemed to be still profound anæsthesia of the left arm, and, to a less degree, of the left half of the face and the left lower extremity. Neither a touch nor pinch nor prick, according to her account, could be felt in the left arm and left side of the neck, and very slightly in the left side of the face and left leg.

Remembering to have read, a short time since, in some German medical journal, of certain observations made upon

the electrical excitability of the opposite hemisphere in a case of hysterical hemianæsthesia, it occurred to me to test the condition in the present case. The following was the mode of procedure which was adopted. I placed the negative pole (sponge rheophore) of a Smee's battery on the nape of the neck, and the positive pole upon the left temple. The battery, I should say, had somewhat run down. With 10, 15, and then 20 cells, the current being occasionally interrupted, the patient asserted that she felt nothing at all. The sponge rheophore being transferred to the right temple, pricking and painful burning of the skin was complained of. I then put on a force of 30 cells and interrupted the current by a toothed wheel. With this application to the left temple the patient reeled so as to require support on her chair, and manifestly experienced a very powerful shock, which she described as excessive giddiness. It was a minute or two before she recovered her equilibrium. The sponge being now transferred to the right temple, the same strength of current being employed, there was a striking difference in the result. The patient required no support, and being questioned, said that she was a little giddy only. Her manner, more important evidence perhaps than any statement, showed that the application was quite tolerable. I again applied the rheophore to the left temple, with the same result of excessive and almost alarming giddiness.

The following facts should be mentioned in reference to the care with which the observation was made. (1) I had said nothing of my intention to anyone; and the resident medical officer who assisted me was quite in ignorance of the object of the application. He unreservedly testified to the different effects produced by the applications. (2) I took care beforehand to moisten the skin of the two temples with warm salt-and-water to exactly the same extent; the sponge was applied with equal pressure to the two temples; and the interruptions of the current were equally numerous, and brought about in precisely the same manner, in each instance.

The day after the applications there was some return of sensibility in the left arm. The current being applied as before to the temples, no difference in the result on the two sides could be now observed.

There has long been, and indeed is still, a fundamental difference of opinion in regard to the question of hysterical hemianæsthesia, some observers being convinced of the reality of the condition, whilst many others see in it only a vagary of the patient who refuses, for some reason, to acknowledge the existence of sensibility in one half of the body. I cannot help thinking that the observation which I have described lends support to the opinion that the condition is a *bonâ fide* one. It will at once be recognised that, supposing the hemianæsthesia in this case to be assumed, the patient would naturally have asserted that the application on the so-described anæsthetic temple produced less shock than that upon the side in which the skin retained its natural sensibility. As I have described, the reverse obtained most unmistakably. We have it, then, that in this case the right cerebral hemisphere—which, if the anæsthesia of the left half of the body were real, would be the hemisphere in fault—appeared to be considerably less excitable by the interrupted voltaic current than the left.

The fact must stand for what it is worth. It would be incautious to conclude very much from a single examination of the kind, which, however, derives a certain importance from its confirming the experience of another observer (whose name I regret being unable to recall), and, if supported by still further observations, is likely to lend important aid towards the solution of one of the most difficult questions in neuro-pathology.

Grosvenor-street, W.

ON THE VALUE OF THE DEPENDENT POSITION OF THE HEAD IN OPERATIONS ON THE MOUTH AND THROAT.

By THOMAS ANNANDALE,

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EIGHTEEN months ago, when removing the greater part of the lower jaw, including its symphysis, I tried the plan of allowing the patient's head to fall over the edge of the table. Although the tongue immediately fell back towards

the posterior wall of the pharynx after the attachments of the tongue to the jaw had been freely divided, the man's breathing was perfectly easy—much more so than when the head was raised or lay level with the trunk. Before the patient left the theatre I demonstrated this fact several times to the students present, and thoroughly convinced them and myself of its correctness.

The experience of this case led me to place the head in the same position in my next operation on the throat (thyrotomy); and since then I have performed many operations in this way on the mouth and throat with complete success, and with great facility as regards the prevention of blood passing into the air-passages, the obtaining a good view of the parts, and the carrying out of the necessary manipulations.

Among the operations in which I have used this method have been, a second case of thyrotomy, two cases of tumour of the palate, one case of large epulis, and three cases of cleft palate. In all these operations I have been impressed with the advantages of this position of the head. Complete anaesthesia by means of chloroform, or a mixture of chloroform and ether, has been kept up without any inconvenience during the whole proceedings.

My present method of keeping the head in this position is to have it hanging over the end of the table and supported there by the hands of an assistant; but I am having a little addition made to my operating table which will allow the head to be supported in this position more efficiently.

Edinburgh.

A NOTE ON

VASO-MOTOR AND TROPHIC NEUROSES.

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(Concluded from page 648.)

I DO not profess to consider fully in the present communication the nutritive lesions which are due to injuries of nerves, but I will just take a brief glance at such conditions, in order to express my present ideas the more clearly and with some completeness. Schroeder van der Kolk, Brown-Séquard, and our countryman J. Reid, have shown that in the severance of the sciatic nerve the muscles, bones, and skin become atrophied, and that this was not so much in consequence of their being dissociated from the nervous centres as in consequence of the functional inaction of the paralysed member. The best practical example with which I am acquainted for showing how lesions of nutrition, caused by central disease of the brain and spinal cord, follow a direct histological law, is that of bedsores, which spread with such alarming rapidity over the lower part of the spine and buttocks. For instance, in a case of apoplexy in which the hæmorrhage exists only in one hemisphere of the brain, with paralysis of the opposite limbs, we invariably find that the destruction of tissue commences in and is limited to the buttock of the paralysed side. On the contrary, when a bed sore is of acute spinal origin, it occupies the median line over the sacrum, and extends symmetrically on either side towards the surrounding textures. The same rule holds good in lesions of nutrition of the lower limbs from spinal softening; if the softening be bilateral the lesions will be bilateral, or if the softening be unilateral the lesions will usually be unilateral. These are facts well known to the experienced physician and surgeon. I bring them thus forward because I am strongly inclined to believe that they form the best data on which to rely as proof that the vascular derangements and troubles of nutrition, such as skin diseases, bedsores, wasting of muscles, &c., which are made evident to us during life, follow precisely the same law in producing degenerative changes and functional disorders throughout the whole course of the cerebro-spinal sympathetic system, and are, in fact, the cause or causes of most of the so-called nervous affections which we have under our consideration.

In the first place, I will note some of the classical examples of diseases well known to us, and which are more

or less essentially due to defective nervous influence in the regulation of nutrition, secretion, and circulation. Of these, Graves' disease, angina pectoris, hemicrania, and atrophy and hypertrophy of the muscles, skin and its appendages, are, perhaps, the most noteworthy. In Graves' disease we have a condition which certainly of late years has been looked upon in the light of a neurosis, by Handfield Jones, Fletcher, Laycock, von Graefe, Trousseau, and others. Of this disease the three cardinal symptoms and signs are, protrusion of the eyeballs, palpitation of the heart, and an enlargement of the thyroid gland. It is not necessary that these characteristics should occur simultaneously, but they are usually associated, in a more or less marked degree, during the course of the disease. That this disease is due to an especial idiosyncrasy of the nervous system cannot, as far as my observation goes, be doubted for one single moment. Undoubtedly there are exciting causes, yet the influence which they exercise can be referred without much difficulty to their action upon the vaso-motor, sympathetic, and trophic nerves. We have seen what takes place when the cervical sympathetic is both irritated and divided; now the analogy between these alterations of function and what we meet with in Graves' disease is deserving of consideration. The dilatation of the vessels is indicated by the strongly pulsating, prominent, and frequently tortuous little arteries, which are in this region supplied by the carotid arteries, and again more especially by the swollen arteries of the thyroid gland. The coming on of goitre so quickly, in the course of a few days, the softness of the swelling, the perceptible pulsation of the thyroid arteries, the loud blowing sound which is heard over them, the rapid increase and decrease of the tumour, according to the force of the contractions of the heart, and the engorged condition of the veins so frequently seen on the surface of the gland, all these clearly point to the conclusion that we have to do chiefly with a dilatation of the vessels which are distributed in the thyroid body, and this conclusion is fully borne out by anatomical investigation.¹ To say nothing of the extreme discomfort to the patient, caused by the palpitation and rapid action of the heart, there is one especial feature of this disease which is of the highest practical value, and which is deserving of careful consideration—I mean the protrusion of the eyeballs. This protrusion is not often confined to one eye alone, but usually extends to both eyes.²

Eulenburg and Guttman³ have shown that, after division of the cervical sympathetic, no exophthalmos occurs, but rather a sinking of the eyeball within the orbit. If, however, the central end of the divided nerve be subjected to electrical stimulation, the eyeball is protruded, and we have exophthalmos. Again, it has been shown that exophthalmos follows irritation merely of the cervical sympathetic system, yet I would not have it to be inferred that this protrusion of the eyeball is due entirely to interchange, as between it and the cervical ganglia of the sympathetic, since any serious check to the circulation of blood in the head will produce similar effects.

In angina pectoris we find a grouping together of symptoms which show pretty clearly that it is a neurosis, although the coronary arteries have undergone atheromatous and other changes. For instance, we have the paroxysmal character of the pain in the region of the heart, and usually extending over the left side of the chest and down the left arm, and sometimes down both sides and arms, with an associated sensation of anxiety and constriction and of other vaso-motor and sensitive disturbances. Laennec called it "neuralgia cordis," Trousseau "an epileptic form of neuralgia," and Stokes "an hyperæsthetic state of a weakened heart." Barkow even called it "a trophoneurosis of the heart," and, indeed, various other names have been given to it by different observers. The true condition of it, however, as far as we know, has been determined by the modern researches of physiologists, and notably by those of Lauder Brunton.⁴ Eulenburg and Guttman have given to this subject considerable attention.⁵ They say truly that in discussing angina pectoris they are unable to argue from the state of any one system of cardiac nerves, and that they can

¹ Eulenburg and Guttman: Sympathetic System of Nerves, 1879. Naumann: Deutsche Klinik, 1853. F. Banks: Dublin Hosp. Gaz., 1855. Fournier et Ollivier: Union Méd., 1868, p. 95.

² Chisholm: Med. Times and Gaz., 1871.

³ Op. cit. 1879.

⁴ THE LANCET, 1867, and other communications.

⁵ Eulenburg: Angina. Ziemssen's Cyclopædia of the Practice of Medicine, vol. xiv. Eulenburg and Guttman: Sympathetic System of Nerves, 1879.