

REMARKS

ON
A CASE OF EPILEPTIFORM NEURALGIA,
TREATED BY NERVE-STRETCHING.*

By T. GRAINGER STEWART, M.D.,
Professor of the Practice of Physic in the University of Edinburgh.

ON returning from my autumn holiday, last year, I found among the patients under treatment, in my department in the Royal Infirmary, one who had been sent up from the surgical wards, suffering from epileptiform neuralgia. He was a man of seventy years, and was employed as a station-master on one of the railways of Cumberland. There was no evidence of hereditary predisposition to nervous disease; he was a temperate man, and his surroundings had been for the most part favourable. In his railway work, he had naturally been somewhat exposed to the weather and a good deal to draughts, but never in any extraordinary degree. He had been perfectly healthy till the year 1862, when he was seized with facial neuralgia. At first, the pain was of a burning character, and it gradually increased in severity, the paroxysms becoming, as time went on, more frequent and intense, until at last his life was almost intolerable to him; indeed, had it not been for the remissions during which the pain was easier, and the periods of immunity during which he was entirely well, it would have been so. These periods of immunity varied in length—sometimes six weeks, sometimes three months, and on one occasion a whole year; but, sooner or later, the attacks returned, and for six or eight weeks he had little freedom from agony, and never a for moment a feeling of security. The attack from which he was suffering at the time of his admission to my wards had lasted from the end of April, and showed no signs of abatement up to the time I saw him. He was a short man, rather thin, but not emaciated, and said he had lost during the past year about a couple of stone in weight; still there was nothing wrong with him, excepting the neuralgia, and often that was not severe. When a paroxysm occurred, his face would suddenly change; twitching of its muscles on the right side set in, leading to the strangest grimaces; the agony began simultaneously with the movement, and was most intense in the lines of distribution of the middle branch of the fifth nerve on the right side. The patient would seize his head with his hands and press the painful part with the utmost violence; would drive his knuckles into the space beneath the malar bone; would slap his face, tear his hair, twist his body in all directions, and sometimes lose all self-control and shout out in his agony. This would continue for a few seconds, or perhaps a minute or two; then the pain and other symptoms would subside. The paroxysms might recur almost immediately or not for hours; generally, they were most severe in the evening and during the night. They were induced easily by touching the skin or pulling the hairs of any part of the area of distribution of the affected nerve, or by touching the gums or tongue. Mastication had thus become impossible, and all food had to be taken in the liquid form; and no effort was spared, by the use of tubes or other contrivance, to smuggle it past the sensitive region. Nine of the teeth had been extracted in the hope of obtaining relief, but without benefit.

It was clear that the case afforded a typical example of the malady which Trousseau has described as epileptiform neuralgia. No doubt, many of you are familiar with that classical description, and will remember that it includes two varieties: the more common, one in which there is pain without spasm; the more rare, in which pain and spasm coexist.

A few years of practice had sufficed to satisfy Trousseau that the disease was quite different from ordinary neuralgia of the face, and one of the features was its utter incurability. This feature, along with its suddenness of appearance and disappearance, led him to associate it with epilepsy, and to employ the name now in general use. He sketches several cases with his wonted vividness, of which the following may serve as an example.

"This poor patient had for many years been subject to the convulsive form of neuralgia. His paroxysms lasted sometimes a few seconds only, and sometimes a minute; they recurred whenever he spoke, drank, or ate, or whenever one touched with the tip of a finger the few teeth which he had left. The pain was seated in all the branches of the trifacial nerve of one side, but chiefly in the infra-orbital division. Several of the nerve-trunks had been divided already; but the relief had only been temporary, and the pain had always obsti-

nately returned after an interval of from a few weeks to a few months. The extraction of his last remaining teeth gave him no relief. Prolonged applications of a solution of cyanide of potassium did some good; but, the pain still returning, as awful and as unbearable as ever, I decided upon dividing the infra-orbital branch. Bonnet performed the operation with great skill. The patient was relieved instantly, and remained free from pain for several months. The following year, I saw him again, suffering in the same way in the course of another nerve of the face, and with the same convulsions. Professor Roux, as far as I can remember, again divided several nerves. Lastly, in 1841, Dr. Piedagnel saw in his wards at La Pitié this same individual, whom he had known thirty years previously, when house-physician at the St. Antoine Hospital. The poor man's face was scarred from the surgical operations which he had undergone; for, whenever the pain became intolerable, he implored the help of the knife, for this at least gave him relief for a few days, and sometimes a few months."

Our poor patient had, like Trousseau's, submitted to many plans of treatment, but with a like want of relief. He had had many teeth extracted, as we have seen; had opium by the mouth, and morphia subcutaneously; had croton-chloral and other sedatives, quinine and iron, all without result; and, after a further trial of many of these, the question arose whether we should dismiss him as incurable or try yet other remedies. Experience seemed to show that Trousseau's gloomy prognosis was better warranted by facts than the brighter one maintained by Dr. Anstie; and we certainly could not look with hopefulness to any of the ordinary methods. Section of the nerve, or neurotomy, might have been tried; but the advantage obtained in former cases had been merely temporary, the pain reappearing as soon as the nerve had healed, or even sooner, or, even at the best, not being long deferred. Excision of a piece of the nerve, or neurectomy, had not produced results conspicuously better. Neither of these methods, then, commended itself for adoption in this case; but it seemed to me possible that the plan of nerve-stretching introduced by Nussbaum, and which had proved so markedly useful in some similar conditions, might be tried with advantage. My first personal experience of that plan of treatment was in 1876, when a patient was admitted to my wards complaining of various nervous symptoms, and, above all, of very agonising pain in the line of the sciatic nerve. As none of the sedatives usually helpful afforded any relief, I thought that Nussbaum's plan might be tried; and, after consultation with Professor Lister, it was arranged that he should operate. He did so with the use of antiseptic precautions, and the operation was followed by extraordinary relief. Since that time, it has taken its place in Edinburgh, and has been successfully performed by Mr. Chiene and several other of our surgeons.

In the absence of Professor Annandale, Dr. Bishop, who was in charge of the clinical surgical wards, proceeded on October 22nd to operate. With the usual antiseptic precautions, he cut down upon the infra-orbital nerve at its point of emergence from the bone; and, having isolated the nerve, stretched it as vigorously as its size seemed to warrant. In the course of that day, there were several severe attacks, and for some time the pain occasionally recurred; but it speedily abated, and for a month thereafter there was almost complete immunity. At the end of that time, paroxysms recurred; and on November 28th another attempt was made to stretch the nerve. In consequence of the matting of the tissue in the cicatrix, the nerve was cut through, and the parts became anaesthetic for the time. Still the pain continued, and it was soon clear that little or nothing had been gained by the second operation. However, on examining the patient closely, I found that the points of origin and of maximum intensity of the pain were different from what they had been at first; that the pain now mainly originated in the mental branch of the third division of the fifth, instead of in the labial branch of the middle division; and I then regretted that I had not had the mental nerve stretched as well as the infra-orbital.

On December 18th, Dr. Bishop proceeded to operate upon it also. The operation afforded instantaneous relief, and from that day to this there has been no return of the pain. Last week, I received a letter stating that he had never had a twinge of pain since the last operation was performed.

Considering that the disease has hitherto yielded to no treatment, it seems that this case is of considerable value. It is true that it is but one case, and the practice may not prove equally successful in others. It is also true that the relief may not prove permanent. It is only five months since the last operation was performed, and the patient has had at least one period of immunity as long during the course of his illness. But it cannot reasonably be doubted that the present immunity is due to the operation; and till evidence turn up to prove its failure, I think the treatment deserves a trial in every such case. Indeed, I would say that, even should the pain recur, the plan of treatment is entitled to take the foremost place among the remedies for the disease. With regard to the

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operation, there are two points on which I should like to insist: 1. That all the branches affected should be stretched, and not merely the one in which the disease is chiefly localised; and 2. That, the nerve being grasped, not merely should traction be made upon the proximal part, but upon the distal also, the lip and cheek being seized and pulled downwards while the nerve is held at the point of emergence.

The case affords an illustration of the associated sympathetic or reflex pain. I think we may conclude that after the first operation there was no paroxysm originating in the infra-orbital nerve, but pain was felt there in association with the morbid action in the line of the third division. I have known of a member of the profession getting, as he said, the whole anatomy of the fifth nerve flashed upon his consciousness by the acute pain produced as he was having a nasal polypus extracted; and as there pain was felt in all the branches when the one was irritated, so here the pain was irradiated along the nerves which had so long been the seat of morbid action.

As to the *modus operandi* of the procedure, it is impossible to speak positively; but there is apparently only one condition which such a procedure could relieve, viz., a shrinking or shortening of the nerve from thickening of its fibrous tissue; but whether this be the correct explanation or not, its utility is beyond question.

ABSTRACT REPORT OF LECTURES ON THE COMPARATIVE ANATOMY OF MAN.

Delivered at the Royal College of Surgeons of England.

By W. H. FLOWER, LL.D., F.R.S.,

Conservator of the Museum, and Hunterian Professor of Comparative Anatomy in the College.

LECTURE VIII.—RACES OF EASTERN ASIA.

MANY races of Asia, of similar physical type to the Mongolian, are divided from the Altaic group by language and by mode of life. One large group is formed by the people of Thibet and of Burmah, with various tribes especially interesting to us, as subjects of the British Empire, dwelling within the north-eastern frontiers of India. Unfortunately, these are at present almost entirely unrepresented in our collection. We have four Burmese crania. They are all short, high, round, or rather square skulls; the average latitudinal index is eighty-two, and the altitudinal index nearly as high. The orbital, nasal, and alveolar indices are all moderate. The nasi-malar angle of 144 deg., is thoroughly Mongoloid. From the Burmese, the transition (physically) to the Malays is very easy; and through the Malays, the purer races of the Polynesians (treated of in the last course of lectures), are connected with the inhabitants of Central Asia.

The various races constituting the population of the vast empire of China all belong to the Mongolian type, and have gradually moved southwards to their present dwelling-places. The existing reigning dynasty is Mandschurian, belonging to the Tungus branch of the Altaics. They conquered the empire in the seventeenth century. The Chinese proper are first heard of in history as dwelling on the southern declivity of the great desert of Gobi. According to their chronicles, they formed their earliest settlements in the north-western provinces of what is now called China about 2,000 B.C. Everywhere they found possessors of the land before them, whom they pushed southwards and eastwards as they advanced. These aboriginal tribes exist to the present day as the Miau or Miautze, and other wild inhabitants of the mountain ranges of the southern part of the country. Mr. Swinhoe, who had great opportunities of observation and the eye of an accomplished naturalist, remarked, after the capture of the Peiho Forts by the English in 1860, that the soldiers drawn from various parts of the Chinese empire, including the Mongol Tartars, presented a wonderful similarity of facial characters. The peculiarities of the Chinese countenance are familiar to everyone: the long, straight, black hair, the yellow complexion, the narrow oblique eyes, high cheek-bones, small straight nose, etc., are especially Mongolian. The following cranial characters are deduced from sixteen specimens of the male sex. They agree in the main with those described by Barnard Davis and others. The average capacity is 1424. This is less than the average of Europeans; but some actual brain weights of the Chinese, taken by Dr. Crechy Clapham, are considerably larger (*Journal of the Anthropol. Institute*, 1877). Further observations are, however, required. The index of breadth is 782, so

they fall under the mesocephalic category, inclining to brachycephaly. All the other Mongolian races hitherto treated of have been decidedly brachycephalic. The height-index is lower, viz., 753. The general form of the face is Mongolian; the forehead smooth, with little development of the glabella, the space between the orbits wide; the malar bones large and prominent; the anterior root of the jugal arch stands out laterally from the face, then turns sharply backwards beyond the maxillo-jugal suture, instead of gradually sloping backwards from that point, as in the English skull. The nasi-malar angle is 142 deg. The orbital, nasal, and alveolar indices are all medium, being respectively 869, 504, and 993.

Few oriental races are now better known to us than the Japanese, though it is scarcely more than twenty years since unrestricted intercourse with them commenced. In the polysyllabic character of their language, they differ entirely from the Chinese, and resemble the Altaic races. They appear to have migrated from the Asiatic continent to the islands they now inhabit in the seventh century B.C., first taking possession of the southernmost island Kiu-siu, and soon afterwards passing on into Nippon, gradually driving out the original population, the Ainos. It is, however, probable that some portion of the latter became absorbed into the conquering race, which circumstance may account for part of the diversity of features and type seen among them. In the main, the physical characters of the Japanese are Mongolian. At present, we have really very little information about their anatomy. There are but six male skulls in the College Museum, which give the following averages: capacity, 1486; latitudinal index, 771; altitudinal index, 753; orbital index, 910; nasal, 472; alveolar, 971; nasi-malar angle, 141 deg. It will thus be seen that they do not differ greatly from those of the Chinese, but that they have a larger internal capacity, a rather narrower form, a higher orbital, and a considerably lower nasal index, and a lower alveolar index, being as orthognathous as most Europeans. Of course these observations require verification upon a larger number of specimens before they can be accepted as characteristic of the race. They are here given as the only ones obtainable.

The people who inhabited Japan before the Japanese are called the Ainos. They have lately attracted much attention from ethnologists, owing to the fact that in their physical characters, manners, and customs, they entirely differ from all the other races of the part of the world in which they dwell. There is now a very considerable literature devoted to them, the last contribution to it being the elaborate memoir of M. Arnoutchine, published in Russian, of which an abstract in French is given in the *Revue d'Anthropologie* for 1878. It relates chiefly to the Ainos of the island of Saghalien, while most of the other original memoirs treat of those of Jesso. They formerly inhabited the whole of the Japanese islands, Saghalien and the Kuriles. They are mentioned in Chinese books before the time of Confucius, under the significant title of the villous or hairy men; and are called by the Japanese "Mo-sins", a word having the same signification. "Aino", in their own language, means "the men", or "the people". Their numbers are now extremely reduced, and the territory they occupy limited by the encroachments of the Japanese from the south, who have driven them up to the most northern parts of the island of Jesso, while the Mandschu Tartars have taken from them more than two-thirds of the island of Saghalien. Though their language has received a considerable infusion of Japanese and Mandschu words, it appears to be of fundamentally different origin. They have no agriculture, and live principally by fishing and hunting, shooting deer and bears with the bow and arrow. A. S. Bickmore (*Trans. Ethnol. Soc. of London*, vol. vii, N. S., 1869) says "they are perfectly overflowing with good nature, and kind feeling is shown even to strangers. The expression of their face at once convinces everyone of their perfect honesty, and is in marked contrast to the reserved crafty looks of the Turanian races. They appear to be of a mild contented disposition, instead of being filled with the restless roaming spirit of the Mongols and Mandschus".

In stature, they are short (the men about five feet two inches in height), but stouter made and more hardy and muscular than the Japanese. Their head is large, their colour rather dark; their forehead low, the superciliary ridges prominent; the nose straight, short, and thick, and rounded at the end. The eyes are open, and not oblique, like those of the Mongols, and bright, sparkling, and intensely black. What distinguishes them most in external appearance from all the surrounding races is the abundant development of their hair and beard. This is black, coarse, straight, and shaggy; that on the head is worn long over the shoulders, and mingles with the beard. In early accounts of the Ainos, their hairiness was much exaggerated, as it was commonly stated that their body had a complete covering, whereas it is now known that they do not exceed in this respect many Europeans. Contrast with their smooth-skinned Mongolian neighbours may have had something to do with these overcoloured statements. Osteological remains of the