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ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON CLEFT PALATE; WITH CASES ILLUSTRATING THE NEW OPERATION OF STAPHYLORAPHY.

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London, and Surgeon to King's College Hospital.

(Concluded from page 27 of last Number.)

THE following cases illustrate many of the general observations already made, and afford evidence of the utility of the practice inculcated.

CASE I. D. P., æt. 17. The details of this case are given in vol. xxvii. of the *Medico-Chirurgical Transactions*. Since that publication, I have repeatedly seen this gentleman, in whom the benefit of the operation has been more strikingly evinced than in any other of my patients. This I attribute, in a great measure, to his zeal in the study of elocution.

CASE II. Miss W., æt. 18. The particulars of this case also are given in the volume above referred to. The improvement in speech, since the operation, has not been remarkable. The palate itself has been rendered more perfect than in the preceding case; but, from timidity or want of energy, the lady has taken little or no advantage of the improved condition of the parts.

CASE III. G. D., æt. 18. The fissure extended through the soft, and the greater portion of the hard palate; and the soft parts were so narrow, that I hesitated in recommending an operation. On the 4th of January, 1845, I operated on the patient: in addition to making the incisions devised by myself, I dissected the soft tissues on each side of the hard palate from this part of the fissure, in accordance with the directions of Dr. J. M. Warren; and, by this proceeding, was enabled to close the whole gap at once. Sloughing took place throughout the greater extent of the junction; and, on the fifth day, the fissure was wider than ever, the margins on each side, between the stitches, having given way. The operation was a complete failure; and I attribute this result to the ligatures having been placed too near to each other, and drawn too tight, so that sufficient circulation was not permitted.

CASE IV. J. T., æt. 23. This patient was sent to me by Mr. Tuson, of the Middlesex hospital. That gentleman had operated three times upon the case, in accordance with the practice of Roux, but without success. A narrow point of junction had been gained about the middle, which, by the movements of the sides, had become gradually elongated, so as to resemble a piece of thread, three-fourths of an inch in length, stretched between the two sides of the fissure. The cleft had originally been limited to the soft palate; and, although the margins had been three times pared, they still seemed sufficiently broad to sanction the hope of success from my own proceeding. On the 23rd of April, 1845, I operated; and the union was perfect throughout, with the exception of a small aperture in front, a little larger than might admit the point of a probe. In paring the edges, I left the transverse band untouched; but came so close upon its roots at each side, that it could not afterwards be recognized.

CASE V. S. S., æt. 22. The fissure extended through the soft palate, and nearly one-half of the hard. On the 8th of May, 1845, the soft parts were brought together, and the union was, in due time, complete. Three weeks afterwards, the soft structures were dissected from the hard palate, and brought together in the middle. On the third day, when the stitches were removed, the union seemed perfect; but in two days more the junction opened; and, ere long, as the soft parts became united to the bones, the orifice was as wide as ever. The union of the soft velum remained perfect.

CASE VI. W. F. G., æt. 24. The extent of the fissure was about the same as in the last case; and the soft parts were thin, narrow, and remarkably mobile. The operation was performed on the 8th of October, 1845. The spasm of the muscles, when the parts were touched, was so great, that the preliminary incisions were not so fully carried out as I desired; nevertheless, union took place throughout the whole extent of the soft palate. An oval hole remained in front, where, owing to the flatness of the osseous roof, it was not deemed advisable to attempt an operation. An obturator was afterwards applied by Mr. Saunders, with the result of obviously improving the articulation.

CASE VII. J. B., æt. 11, had a fissure in the soft parts only. The patient and his friends were particularly anxious that an operation should be performed. Although fearful that the boy might not keep sufficiently quiet, I trusted, on this occasion, to his assurance that he would. He kept his word; and the proceedings were most satisfactorily accomplished. On the second day, union seemed perfect, and I removed the stitches; but during the subsequent night, the whole separated, and the gap was as wide as ever. I attribute the failure in this case chiefly to the removal of the stitches at too early a period. Probably, during sleep, or in taking food, the parts had been over-stretched, and the delicate adhesions had given way.

CASE VIII. G. B., æt. 16. The fissure extended through the soft, and the greater portion of the hard palate. An operation, limited to the soft palate, was performed on the 16th October, 1845, with complete success. An obturator was afterwards adapted to the opening, and the improvement in voice and speech was very satisfactory. This patient, like most others similarly affected, had a hare-lip when born,

which had been operated on in early life ; the malformation was, however, still very marked. Another operation was performed some months after that on the palate, with the effect of greatly improving both the speech and appearance. Mr. Saunders, who constructed the obturator, tells me that he has recently seen this gentleman in consequence of some modification of the apparatus being requisite, and that the result of our conjoint proceedings is all that could be desired.

CASE IX. C. T., æt. 16, had a fissure limited to the soft palate. A completely successful operation was performed on the 8th of December, 1845. This patient was brought by Mr. T. A. Richards, of Greenterrace, Camberwell, to my friend Mr. S. Lane, of Grosvenor-place, who, knowing my interest in such cases, kindly placed her under my care. I had the advantage of being assisted in the operation by both of these gentlemen.

CASE X. W., æt. 26. The cleft extended through the soft parts only. The operation was performed on the 1st of March, 1846, and was followed by complete union, excepting in the two portions of the uvula, which were subsequently united by paring their edges, and retaining them in apposition by a single stitch. The non-union, at first, of the two parts of the uvula, I attribute to the soft parts dropping so much upon the root of the tongue, as to be disturbed by the movements of that organ. The voice and speech were soon remarkably improved in this case.

CASE XI. T. S., æt. 26, had a cleft extending through the soft, and one-half of the hard, palate. The operation was performed on the soft parts, 28th October, 1846, and was followed by perfect union. An obturator was used to fill the aperture in front, from which great improvement in voice and speech resulted.

CASE XII. J. M., æt. 18, had a wide fissure in the soft palate. An operation had been performed some months previously, on the old plan, which had completely failed. My own process was resorted to, March 24th, 1848, with perfect success. The intellect of this patient was not of the brightest kind ; and, although some improvement in the tone of the voice was perceptible, there was little amendment in his speech when he was last seen, some months after the operation.

CASE XIII. J. H., æt. 16. The fissure was limited to the soft velum. The operation was performed on the 8th August, 1848 ; and the union was perfect. The voice was considerably improved ; but the patient left town too soon to permit a judgment to be formed regarding his speech.

CASE XIV. T., æt. 29, had a very wide fissure in the soft palate, extending also through about three-quarters of an inch of the hard ; the soft parts were very narrow and mobile. An operation was performed, 20th September, 1848, in which the soft structures were dissected from the bones, and brought together in the mesial line. The soft velum united satisfactorily, but the uvula remained split, seemingly for the reason stated in Case x : a small slough formed in the tissues dissected from the bones, in the site of one of the stitches, and an aperture remained in this situation. I am still in doubt whether it will be preferable to apply an obturator here, or to repeat the operation, in order to close the circular opening now remaining. My friend, Mr. Henry Lee,

did me the honour, two years previously, to submit the case for my opinion, when I advised that an operation should not be performed. I was led to this decision by considering that there was little probability of the parts being united in a satisfactory manner. Moreover, the patient spoke so remarkably well (under the circumstances), that there seemed no great hope of improvement, even were the operation successful; and, in addition, I was of opinion that no improvement in hearing would result. This patient, like many others with this malformation, was very deaf, and more desirous of relief in this respect than as regarded the palate or speech. She assented at the time to the opinion given; but, after the lapse of two years, having still a hope of her hearing being improved, determined to have the operation performed on her palate. Mr. Lee again desired that I should see her; and, after my explanation had been given as to the probability of a failure, she requested that an operation might be performed. I undertook the proceeding with great reluctance, but did every thing in my power to ensure success. Contrary to my expectations, union took place as above narrated; and I have now no doubt, that after joining the two portions of the uvula, (a proceeding which may be considered as almost certain of success,) and the adaptation of an obturator, should that be preferred, there will be considerable improvement. The patient has not yet returned to town to have the roof of the mouth made perfect; and I am unable to say how far her hearing has been benefited. She fancied, within a fortnight after the operation, that there was an improvement; but I have little hope of her being able to dispense with the use of an ear-trumpet.

CASE XV. M. G., æt. 18, had a cleft extending through the soft palate, and about half an inch of the hard. In the operation, which was performed on the 16th October, 1848, an attempt was made to close the aperture in the bones, as well as behind; but a portion of one side sloughed, and the soft velum alone was permanently closed. A plug of caoutchouc was subsequently fitted to the aperture; and when I last saw the patient, (a few days ago,) her voice was greatly improved.

It may thus be observed, that, out of fifteen cases, I have been successful in closing the soft palate in thirteen. One of the cases of failure was the third in which my own peculiar practice was employed. It was a most unfavourable example, and one which, in all probability, would not have admitted of any remedy by the ordinary plan. Probably I should not now attempt an operation under such circumstances.

In addition to these cases, I have permission to refer to others which have been treated in accordance with my views.

CASE XVI. G. L., æt. 20, who had a simple fissure in the soft parts, was operated upon in King's College Hospital, by my colleague Mr. Partridge, in August, 1845. There was only partial union in the first instance; but a second operation, some months afterwards, closed the gap nearly through its whole extent.

CASE XVII. G. L. R., æt. 18, had a simple fissure in the soft parts, and was operated on successfully, in King's College Hospital, in January, 1846, by my then colleague, Mr. Simon.

Several friends have kindly favoured me with accounts of cases which

they have treated in a similar manner; and the particulars are here subjoined, exactly as they have been furnished to me.

CASE XVIII. Mr. Bowman writes thus:—"My dear Fergusson,—The case of Staphyloraphy, of which you wish a short account, was that of a young medical man, now practising in the south of England, upon whom I operated twice; at first unsuccessfully, according to M. Roux's method, and without lateral incisions; but afterwards with a successful result, after making the divisions of muscles, as you recommend.

"The fissure extended through the whole of the soft palate, coming quite up to the bone.

"On the first occasion, I think in 1842, I simply pared the edges and brought them together, and enjoined him not to swallow till the third day; in this respect adopting the views of the distinguished French surgeon, some of whose operations I had previously witnessed in Paris, and one in London. During two days, the stomach was much disturbed with repeated vomiting; and though the wound appeared to be agglutinated when the stitches were removed on the fourth day, ulceration gradually extended from the top to the bottom, and the whole parted asunder, to my great regret.

"In 1845, after the publication of your views on this subject, this gentleman again applied to me, and expressed a strong desire that I should make another attempt to procure union. I had already made up my mind to adopt, on the next opportunity, your proposal with regard to the preliminary section of the muscles, and also to give food on at least the second day, if not earlier. I accordingly noticed the situations in which the lateral halves of the palate were dragged, during his efforts at movement in the throat, while the mouth was open, and with your well-contrived knife made the requisite division, I suppose, of the levator palati on each side, with the immediate effect of causing the flaps to hang more loosely towards the median line. I then passed three ligatures. This was at ten A.M., and he had previously had his usual breakfast. He thought he could easily manage without food till the next morning, and accordingly took none; but I was then sorry to find him suffering again from repeated vomiting, with severe sick headache, to which he was liable, and I was almost ready to abandon hope. I gave him a small dose of calomel, and some beef tea; the vomiting recurred seven or eight times during the day, but left him towards evening, and did not return. He assured me that neither the effort of vomiting, nor that of swallowing, caused any dragging upon the threads, as far as he could judge from his sensations. To be brief, these apparently untoward circumstances had no injurious effect on the process of union, which seemed to take place as perfectly as possible, and in the whole extent, except a minute space next the hard palate, where a kind of pin-hole remained and still exists, but without any bad influence on his voice.

"Since the operation, his voice has considerably improved; but he has still some peculiarity and indistinctness of utterance, which will probably now be permanent, as it has resisted the efforts of a well-known teacher of elocution to overcome it.

"You ask me for my opinion of the anatomical grounds on which you have founded your improved method of performing staphyloraphy.

I think them in all respects sound, and likely to stand the test of experience ; at least I intend to operate according to the plan you have so ingeniously framed upon them, when opportunities present themselves.

—Believe me most sincerely yours,

W. BOWMAN."

" 14 Golden-square, Nov. 23, 1848."

I had the honour of assisting Mr. Bowman in the operation which he first performed, and cannot speak too highly of the able manner in which it was conducted. There appeared to be, at the time, every prospect of success.

My friend and former pupil, Mr. Robert R. Storks, has given me the following interesting narrative :—

CASE XIX. " M. J., æt. 20, applied to me in June, 1846, for relief from congenital fissure of the soft palate, which, on examination, presented the following appearances :—The fissure extended directly in the mesial line, from the posterior edge of the horizontal plates of the palate bones to the extremity of the uvula, which was divided into two nearly symmetrical halves. The flaps on either side were ample, and during deglutition lay almost in apposition, but, on irritating the fauces, they were drawn powerfully upwards and outwards, and were with difficulty distinguished from the surrounding mucous membrane. Her articulation was very imperfect ; and, during mastication, particles of food passed into the posterior nares, occasioning great distress.

On June 21st, Staphyloraphy, after the method recommended by Mr. Fergusson, was performed, the levator palati on each side being divided. After the division of these muscles, the flaps were nearly in apposition, although there had been considerable loss of substance from the paring of the edges of the fissure ; nor could I excite, on either side, any contraction by irritating the parts with the finger. As no other muscular fibres appeared in this case to exercise any influence opposed to the union of the parts, I did not interfere with either the palato-glossi or palato-pharyngei muscles. Four stitches were required to bring the parts together ; one of which I removed on the second, the remaining three on the third day, after the operation. Beef tea and wine were allowed after the first twenty-four hours had elapsed. On the fourth day she had a severe attack of sore throat, accompanied with ulceration and erythematous redness over the palate ; on the fifth day it was subsiding ; and it was, after a week, difficult to say that an operation had ever been performed. It would be out of place for me to make any observations upon the case here narrated ; but I cannot refrain from bearing my unbiassed testimony in favour of the views laid before the profession by Mr. Fergusson, in the *Medico-Chirurgical Transactions*. Having had opportunities of witnessing the performance of the old operation, in the hands of some of the most eminent surgeons of the day, including its originator, M. Roux ; and subsequently, through the kindness of Mr. Fergusson, having examined his preparation and assisted him in many of his operations, I cannot too strongly express the opinion, that in my humble judgment, the relief of the lamentable deficiency it is proposed to remedy, is, by the latter proceeding (assuming that the soft parts are sufficiently ample to meet in the mesial line), rendered as certain of success as the operation for hare-lip. The passive condition to which the parts are reduced, by the division of the

muscular fibres, the effusion of lymph above the palate, acting as a splint and rendering motion impracticable, combined with the greater amplitude given to the soft parts by the partial and temporary destruction of their arched form, may be enumerated as perhaps the principal advantages of this proceeding. In addition, the paralyzed condition of the muscles influencing the wound, enables the surgeon to allow the patient food at a much earlier period than after the old operation,—a matter of no slight importance in some constitutions. Two things are essentially necessary before any individual is competent to give an opinion upon this subject : 1st. That he should have seen and carefully examined the preparation upon which Mr. Fergusson founds his views ; and 2ndly. That he should have witnessed the performance of the operation in good hands. The instruments necessary are few and simple ; but they require that, for the absence of which no mechanical ingenuity will compensate—delicate manipulation. I had another opportunity of partially putting into practice this operation in a very difficult case, in which the plan was as successful as I could anticipate :—A female had been left, after syphilitic ulceration, with an aperture in the soft palate, admitting my fore-finger. By means of the knife recommended by Mr. Fergusson, I was enabled to divide the levatores palati nearly to their required extent ; the edges were pared, the aperture being made, by the incision, elliptical rather than circular, and the parts brought together. The wound united except at one point, into which, when cicatrization was complete, I could only introduce the ordinary drawing pencil. The proceedings afforded the patient great relief ; but circumstances prevented me from following out the case, and I have consequently been unable to remedy the existing deficiency.”

Mr. Storcks gratified me by asking my assistance in the first of the above cases ; and, in my opinion, the operation could not have had greater justice done to it. It is with me, as with all others who have the pleasure of that gentleman's acquaintance, a matter of deep regret, that a young surgeon of such promise should be prevented, by ill health, from following a profession in which he has already so ably distinguished himself.

CASE XX. My friend Mr. Quain thus writes to me :—

“ Keppel Street, 20th Nov. 1848.

“ My dear Sir,—After having carefully examined the preparation which you kindly showed me, as well as an imperfect one in the Museum of University College, I became so well satisfied of your suggestion, respecting the division of certain muscles being likely to prove a real improvement in the operation for cleft palate, that I resolved to put it in practice on the first opportunity. Accordingly, in operating on a young lad a short time ago, I made the preliminary sections which you recommend, and the case has been completely successful. I look upon your addition to the operation in question, as a very happy application of the plan of dividing muscles, now so advantageously resorted to in some other cases.—I am, my dear sir, faithfully yours, R. QUAIN.”

“ Prof. Fergusson.”

In a visit to University College hospital, shortly after the above date, I had the satisfaction of seeing the patient, who was about to pass from under Mr. Quain's immediate notice.

CASE XXI. My friend Mr. Avery has given me the following particulars :—" Mr. Haddock, æt. 22, a stout, healthy-looking, young farmer from Sutton, in Cambridgeshire, came to me in March last, with cleft palate. It commenced half an inch behind the hard palate, and extended exactly through the middle of the soft palate and uvula. On irritating the parts sharply, both flaps almost entirely disappeared against the sides of the fauces ; but when he swallowed, they met at the mesial line. The operation was performed on the 20th of May, according to the description given in your paper, and the suggestions you were kind enough to make, when you showed me the preparation of the dissection in your possession. The edges were freshened with great facility by transfixing the flaps, at about a line from their edges, with a small pointed bistoury. The division of the levator palati was so free, that the round extremity of your curved knife could be seen moving above the mucous membrane lining the under surface of the palate, just as the tenotomy knife is seen under the integuments, in the division of tendons. The palato-pharyngeus was also freely divided with a bistoury and curved scissors. Although the motions of the flaps were not entirely destroyed, it was quite clear to all present that they were very greatly diminished, particularly at the posterior part of the palate and uvula ; and that, *comparatively*, the flaps could be held and drawn down, like a piece of loose integument. Five different coloured sutures were passed, beginning from before and proceeding backwards, and afterwards tied in the same order. Very little movement of the soft palate could then be produced by irritating the parts sharply, and it lay almost *flat* and loose over the tongue, instead of being *arched*. He had beef tea, gruel, and a little sherry, on and from the first day ; and, which was very grateful to him, he was allowed to sip a little thin gruel whenever he liked ; besides this, he had an enema of beef tea, with a glass of sherry in it, every night and morning. After forty-eight hours the first and third sutures were removed ; on the third day, the fifth ; on the fifth day, the second ; and on the sixth, the fourth and last. He suffered neither constitutional disturbance nor distress ; and his pulse was never above 65. Small ulcerated spots only remained where the sutures had been. They soon all closed, excepting one. On the tenth day he had meat and porter ; on the following day he went about London, and on the twelfth returned home, with a small superficial unclosed spot remaining. I saw him six months afterwards, and found him a much smarter man ; he had married, and his pronunciation was quite distinct, although much of the nasal twang remained."

CASE XXII. Mr. Avery also writes :—" Very soon after, I assisted Mr. Yearsley in a case so precisely similar to the above, that there is scarcely an observation to add to it. Mr. Yearsley had seen the operation performed upon Haddock ; and the treatment employed, and the result, induced him to follow the same plan in every particular. The age of the patient, the state of his health and strength, the time of cure and termination, were, as nearly as could be, the same. After witnessing these two cases, which were so completely successful, where your method was adopted, and having seen the operation performed by M. Roux, and others, in Paris, and by surgeons of the highest eminence in London, where other methods were followed, with total failure or

only partial success,—I think it is but justice to place the happy result to the score of the great improvement you have introduced, by the division, more particularly, of the levator palati muscle. By that division the adverse action of the muscles is greatly diminished, and the flaps are cut in such a manner that they fall by their own weight almost *flat* over the tongue, instead of being held up tightly in an arched form by the upper surface of the soft palate; and I cannot help thinking, that when well performed, and in favourable cases, the success of this operation will be, for the future, the rule instead of the exception. I tried every variety of complicated instruments on the subject, before the operation, but can testify that the very simple means you use and have described to me are incomparably easier of application, and more effective, than any I have seen.”

Both of the gentlemen who treated these cases, politely afforded me an opportunity of seeing the patients; and in each, I felt satisfied that my views had had justice done to them.

CASE XXIII. Mr. Skey, of St. Bartholomew's Hospital, has informed me of a successful example occurring in his private practice.

CASE XXIV. Mr. Shaw, of the Middlesex Hospital, tried the method in a case which came under his care in that institution. The proceeding was unsuccessful,—a result at which I was not astonished; for the condition of the parts was by no means favourable for any operation.

Thus, then, it will be observed, that out of twenty-four cases, in which the practice recommended by me has been put into execution, it has proved of advantage in twenty-one. Many of these were most unfavourable instances; and, in three of the successful cases, the ordinary operations had already failed.

16, George Street, Hanover Square, Jan. 1849.

AN ACCOUNT OF SOME EXPERIMENTS ON THE REMEDIAL ACTION OF ELECTRICITY.

By H. BENCE JONES, M.D., F.R.S., Physician to St. George's Hospital.

THE report on the Treatment of Diseases by Electricity in the Guy's Hospital Reports for 1841, by Dr. Golding Bird, is so full, and the lectures which he delivered at the College of Physicians in 1847, represent his results as so favourable, that I have many doubts whether the opposite estimate of its value, to which my own experiments have led me, may not be owing, either to some defect in the mode of applying the remedy, or, which is more probable, to a too limited experience of its effects.

Whatever the cause of the difference may be, a short statement of the results, which were obtained in St. George's hospital, may assist other experimentors in arriving at the truth regarding the influence of electricity in the cure of disease.

In 1843, Dr. Seymour, who had great confidence in the value of electricity as a remedial agent, applied to the weekly board of St. George's hospital, to appoint one of the senior pupils to take charge of the electrical apparatus, and of the application thereof. This had hitherto been for years left entirely to the care of the surgeon-man. Dr. Thomas