PART III.

HALF-YEARLY REPORTS.

REPORT ON SURGERY.

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PALATO-PLASTY.

Under this title, Dr. David Prince, of Jacksonville, Illinois, publishes a paper in which he makes several suggestions regarding the operative measures adopted for the cure of cleft palate. Upon the division of muscles he observes:

"The division of the palato-pharyngeus and of the palato-glossus by Ferguson, was adopted on the supposition that these muscles tend to pull the two halves of the palate away from each other, but this supposition is believed to be erroneous. It is found by observation of the movements of the curtain of the palate in halves that the contraction of both these pairs of muscles approximates the opposite sides of the cleft, causing the two halves of the uvula, in most cases, to come in contact.

"The mode of this will readily be understood by recalling the manner in which the tongue is protruded by the genio-hyo-glossus. So, while the palate is stiffened by the fibres of the tensor palati, the levator palati, the azygos uvulae, and by a few fibres of the palato-glossus and palato-pharyngeus, the main portions of these last two muscles engage in approximating the two halves. To cut these muscles is, therefore, physiologically absurd, besides endangering their future functional perfection. Without the action of the palato-pharyngeus, the perfect articulation of the gutturals is impossible. The loss of the function of the palato-glossus would not be seriously felt in articulation.

"If this reasoning is founded on correct observation, the division of these muscles must speedily go into disuse. Their division is the result of the fear of the hemorrhage arising from the vertical incisions first made by Dieffenbach. Now that we have a safe way of making these incisions, we may dismiss this fear.

"The muscular fibres of the posterior pillars are chiefly those which
approximate the two sides of the palate, at the same time that the palate is drawn backward by the superior constrictor to the posterior wall of the pharynx, by which movements communication is cut off between the lower pharynx and the upper. In this act the two sides of the pharynx are approximated; and if the palate were divided vertically in the centre and again united by sutures, these muscular fibres would act with the sutures and not against them.

"Again, the muscular fibres of the anterior pillars are those which approximate the two sides of the pillars at the same time that the palate is drawn forward to prevent communication between the mouth and pharynx. If, as before, we suppose the palate to be divided vertically in the centre and again brought together by sutures, the action of these muscles would be with the sutures and not against them.

"Again, it is very important to the future completeness of the function of the palate that these four muscles should have their perfect activity. If the palato-pharyngeus is impaired in its action, the communication between the upper and the lower pharynx can never be closed. The impaired action of the muscular fibres of the anterior pillars is less important in relation to the voice, but the action is essential to some of the functions of the mouth, among which is the use of the blow-pipe. The division of these fibres, either by incision or by the heated wire, is to incur the certainty of the impairment of their power of contraction, and the risk of its complete and permanent destruction.

"The objection here urged does not apply to the division of those muscular fibres which traverse the veil of the palate transversely. Their action is directly antagonistic to that of the sutures, and hence the tendency is to pull apart the approximated halves of the palate. In this view there should be a vertical incision on each side, dividing the transverse fibres of the circumflexus or tensor palati; and the more complete this division, the more complete is the suspension of the traction upon the sutures, to remove which is the object of the incision."

The objection to this free vertical incision has been the liability to severe haemorrhage, but this may be obviated by the use of the galvano-cautery. The methods of applying this means are explained, and illustrated with numerous woodcuts. For paring the edges of the fissure, a number of ingenious scissors, made by Leslie, of St. Louis, are figured.

With reference to the application of sutures, he makes the following suggestion, which seems to be valuable:—

"The wire which is to pass through the cautery openings, and is to encircle the central part of the plate, is first armed with an oiled pasteboard square, having a small perforation in the centre; and as the wire