Palatoplasty : presented to the International Medical Congress, meeting in Copenhagen, August, 1884 / by David Prince.

Presented to the International Medical Congress, Meeting in Copenhagen, August, 1884,

BY DAVID PRINCE, M.D.,

Of Jacksonville, Illinois, U.S.

PALATOPLASTY.

A PAPER explaining new instruments and new methods of operating for Cleft of the Palate, was read before the St. Louis Medical Society, Nov. 28, 1874, published in the "St. Louis Medical and Surgical Journal," January, 1875; copied with cuts in the "London Medical Record," March 3, 1875; and revised and published with additions in the "American Practitioner," for March, 1876.

Since that time, the methods have been improved, and a new instrument devised which has not hitherto been presented to the public. A new modification of the quilled suture has been introduced, which will be described under the name of the *Bead Suture.*

The employment of the new methods and instruments, is found very much to shorten the duration of the operation, while the loss of substance

is lessened, and the probability of union by the first intention is increased.

The facility with which the two halves of the cleft palate may be united is not generally understood. There is an equal want of appreciation of the advantage of an early operation, made before the expiration of the imitative period of life. For illustration; the reason why adult persons fail to learn to pronounce accurately, the peculiar sounds of a foreign language, is not in the constitution of the organs of speech, but in the inability of adapting muscular action to new results. The child varies the muscular movements until the exact sound is secured, and ever afterward, the muscles move so as to secure the same sound. The difficulty experienced in learning a foreign language, applies more emphatically, in the case of cleft palate. The muscular deficiency may be completely removed, but the lack of muscular education, hinders the acquisition of perfect speech. One of the difficulties in self-education, is in the fact that the person speaking does not know that his pronunciation is wrong. It is often noticed, for example, that a child that has acquired some peculiarity in speaking, does not notice that its pronunciation is peculiar, and it is with the greatest difficulty that the habit can be overcome. This difficulty inheres in the habit of false pronunciation.

The same force of habit continues after an

operation for the closure of a cleft palate. By careful drill, the defects of pronunciation can be overcome, little by little, until the detail of speech becomes nearly or quite perfect. It is probable, that much of the depreciation in which the operation is held, is owing to this want of drill after an operation which is in itself perfect.

It follows from this, that the work is only half done when the closure of the palate is secured, even in the most perfect manner. Many persons will learn to execute the proper sounds when speaking slowly, and yet, in ordinary rapid conversation, they will speak as badly as before. The only remedy for this habit, is to forbid ordinary conversation, and to permit speaking only under instruction, every mistake being corrected on the instant.

There has arisen an opinion, to some extent prevalent, that better results are secured by rubber obturators, than by a closure of the parts by means of surgical operations. It is claimed that the reconstructed palate is so short, that it cannot be made to come in contact with the posterior wall of the pharynx; and thus to close the leak of air through the nostrils in pronouncing the guttural sounds. There is some truth in this statement when a considerable amount of substance is lost in the operation, or when the fissure is very wide. It should be remembered, however, that there is as much material of the palate structure present

in a cleft palate as in one in perfect condition. A skilful operation, performed in early youth or in infancy, secures union with an exceedingly small loss of material.

The reason why there is an insufficiency when the operation is done in adult life, is that the face is too wide. When, however, the operation is made in the growing period, the traction of the reconstructed palate secures an approximation of the two sides of the bony skeleton of the face, and this approximation, obviates the condition of lateral tension of the palate after operation.

In order to diminish the tendency of the two halves of the soft palate to fall apart, the plan of an incision parallel with the fissure, was introduced many years ago by Dieffnbach.

The present writer has employed the platinum wire heated by the galvanic current to secure a vertical parting of the substance without hæmorrhage. This plan is found to be attended with some loss of substance, and is on that account objectionable.

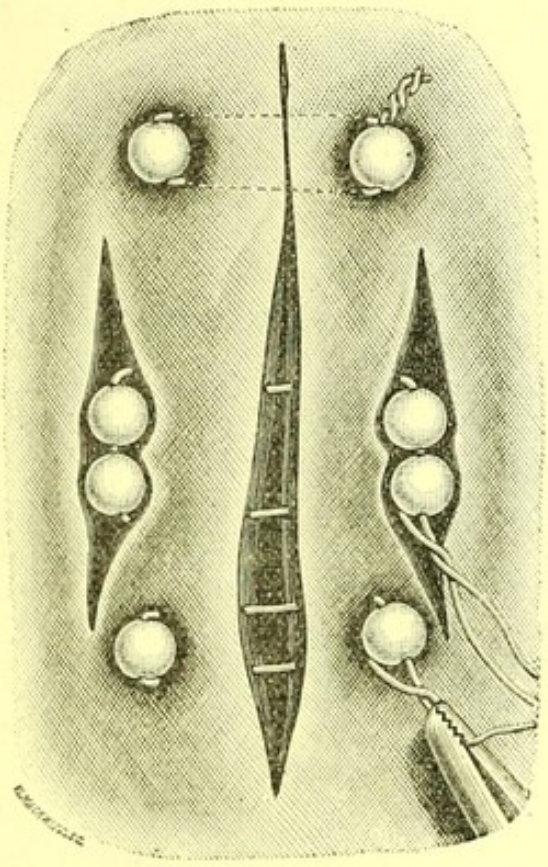
A modification of the quilled suture is found to be easy of introduction, and to serve as a supporting splint while the suture is tender.

This consists in replacing the quill by a bead, and employing silver wire, to pass from one bead to the other.

The suture admits of tightening up, if found to be too lax at any time after its introduction.

The accompanying cut represents the plan of the suture.

The upper figure shows the completed suture, the dotted lines indicating the course of the wires through the tissues.



The lower figure shows the process incomplete, with the manner of twisting the wire, and how it may at any time be twisted tighter.

The middle figure shows the stitch incomplete, and the manner of sinking the stitches with the beads into lateral incisions, when it is necessary to make such incisions in order to secure the apposition of the surfaces to be sutured.

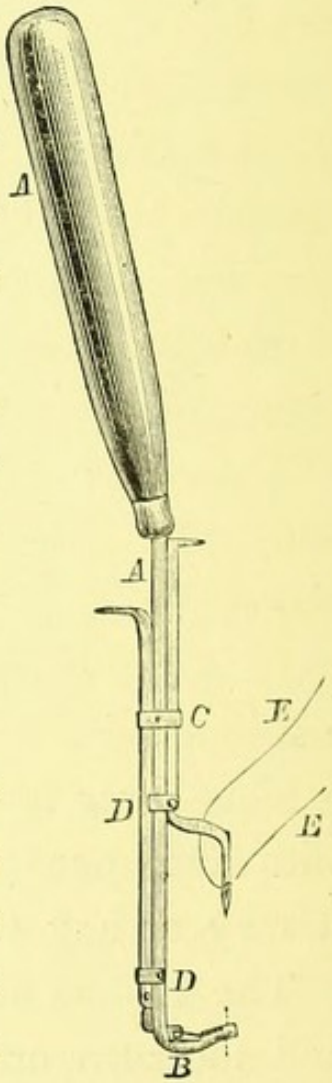
The introduction of two beads is made for the purpose of increasing the extent of the surface

receiving the pressure. One long bead may be employed in place of two short ones.

When it is desired to remove the suture, the wire has only to be cut, and the bead on the same side slips off.*

The wire is then straightened, and pulled out by the loop which holds the other bead.

The needles already referred to, are in two forms. One of them, which is not described here for the first time, is here described and illustrated for completeness in the presentation of the subject.



The pick-up arrangement in both needles, is the invention of my neighbour and friend, Dr. G. V. Black.

Needle working direct :

AA. Shaft and handle.

B. Foot-piece of the shaft curved. Its extreme point has an orifice, the place of which is indicated by the dotted line. The orifice is entered by the needle C carrying the thread EE.

C. Needle with a thumb-piece above and a

* The bead suture serves as a splint for diminishing the mobility of the sutured palate, at the same time that the strain upon the stitches near the margins, is relieved.

point below; curved so that the point will pass the eye indicated by the dotted line.

DD. Pick-up pin with a thumb-piece above its sliding shaft, and its fine point above the B. As the shaft (upper D) goes down, the pin (lower D) moves horizontally and at a right angle to its shaft, and picks up the thread carried by the needle C.

EE. Thread carried by the needle C, and picked by the stiletto or pin indicated by D. This is retained while the needle is withdrawn, so that, on displacing the shaft AA, with its foot-piece B, the thread is exposed, and can be seized by a tenaculum or by the fingers.

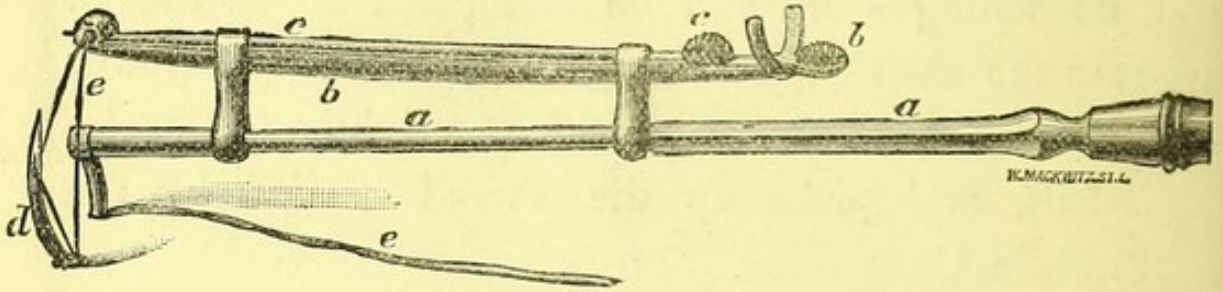
The point of exit of the needle corresponds with that of its entrance, and the stitch is easily picked up.

It is convenient to introduce into the first thread, a second thread looped so as to be doubled. This is looped into the thread connected with the needle, and drawn into position, serving to introduce the silver wire with which the stitch is finally completed.

The new needle here illustrated and described, is especially intended for sutures of the hard palate. (It may also be employed in the vagina and the rectum.)

Preparatory to the employment of the needle, the two edges of the cleft are pared away, and then an incision is made upon either side parallel

with the alveolar processes. After this, the soft parts are separated from the bone by any blunt instrument which will lift the periosteum elsewhere.



DESCRIPTION.

(*aa*) The main shaft of the instrument, having the needle upon its distal end.

(*bb*) The movable shaft, having a thumb-piece at the proximal end, and an orifice at the distal end, to enclose the needle when in the act of picking up the thread.

(*cc*) The pick-up stiletto which picks up the thread, having a thumb-piece at the proximal end and a point at the distal end.

(*d*) The curved needle, represented as having pierced the tissue which is to be sutured.

(*ee*) The thread with which the needle is armed, and which has been picked up by the pick-up stiletto.

The pick-up portion of the instrument is in the position in which it is about to be withdrawn toward the handle, so as to bring the thread within reach of the fingers on the outside, when the instrument is employed in the mouth or other deep place.