A NEW INSTRUMENT FOR RESECTING THE INTERNAL WALL OF MAXILLARY SINUS.

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The accompanying illustration depicts an instrument which I have been using for some time in resecting the internal wall of the maxillary sinus.

Modifying the Cavanaugh nasal shave by furnishing it with a pointed extremity and curving it so that it can be introduced in the proper direction, an instrument is provided which properly used excises the bone and mucous membrane cleanly with a minimum of trauma to the adjacent tissues.

I believe that the main reason that the opening made in the antral wall closes so frequently is because in performing the resection the mucous membrane lining the antral wall is not cut out neatly with the bone but rather is pushed before the entering instrument, separated from the bone and left behind as a jagged curtain more or less occluding the bony opening.

The mucous membrane quickly granulates and fills in the bony opening.

The instrument by reason of the reverse action of its chisel point cuts the mucous membrane cleanly before it engages the bone, obviating the possibility of leaving the mucous membrane behind.

In operating, the inferior turbinate is if necessary bent upwards and the instrument thrust through the antral wall at the usual point of election, then by pulling forwards the reverse chisel engages the wall and makes a clean cut opening the width of the fenestrum.

The use of a rasp for making an opening in the antral wall is very popular, it is a simple and efficient instrument but there is one objection to its use which must be considered, namely, the rasp breaks off rather than cuts the bone and the possibility of small pieces of bone falling into the cavity of the antrum is very real and these should they remain in the sinus (which they may do in spite of repeated irrigations) may become a cause of prolonging suppuration.

That the presence of a piece of bone acting as a foreign body may do this is well illustrated by the following case:

Mr. H. Aet, 56. Injured by flying stick of wood during a cyclone received a wound of the right cheek, the wood penetrating the maxillary sinus. The attending surgeon extracted the wood and sewed up the cheek wound.

Following primary union of the wound there was considerable swelling and tenderness over the region of the sinus, this gradually subsided but in about a month a foul purulent discharge was manifest in the right nostril.

A local specialist diagnosed an acute antritis and by means of a canula introduced through the antral wall under the Inferior Turbinate irrigated the sinus cavity. Suppuration continued in spite of frequent irrigations and five months after the initial injury the patient consulted me.

There was a profuse stinking discharge from the right antrum. A Mickuliz-Krause was performed providing a large opening into the antrum and through this in addition to frequent cleansing irrigations, solutions of Argyrol and Silver Nitrate were each tried out over a period of two months.

As the suppuration persisted a Caldwell-Luc operation was performed, on retracting the cheek and exposing the surface of the bone in the Canine fossa the evidences of the old injury were apparent, there had been a tri-radiate fracture and at the point where the three lines of fracture met a portion of the bone, triangular in shape and about one-half inch from point to point of each side of the triangle was missing.

The opening was enlarged sufficiently for inspection and exploration, the mucous membrane in spite of the prolonged suppuration was smooth and pinkly normal to the eye. The angle formed by the floor of the antrum and the alveolar process was very deep and narrow and down in this gutter was found a piece of black necrotic bone almost circular in form and approximately one-quarter inch in diameter and one millimeter in thickness.

Recovery was uneventful, all discharge having ceased by the end of the second week following the operation.

Judging from the size of the hole in the anterior maxillary wall and the size of the piece of bone found in the sinus it had taken seven months to reduce the fragment to one-half its original dimensions.

Is it not possible that some of our failures to cure may have been due to retained fragments of bone broken off during resection of the sinus wall, acting as foreign bodies and prolonging suppuration altho the primary infection for which we had operated may have been removed.

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