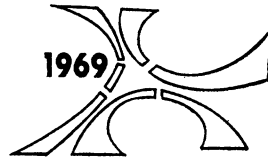


Primary Pharyngeal Flap



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In 1954, we performed our first pharyngeal flap as a primary operation in the one-year-old patient with cleft palate, adding the pharyngeal flap to the palate which had been closed by a von Langenbeck palatoplasty. This had become our routine procedure at the St. Luke's Cleft Palate Clinic in a careful study to ascertain whether extant palatoplasty procedures for cleft palate patients alone provide optimum speech without the use of an associated pharyngoplasty. The historic patterns and the theoretical reasons upon which this choice of therapy was based, plus the operative technique, have all been covered in the past (1, 2, 3) and will not be reiterated. We are concerned herein with an assay of results.

Results

To date, von Langenbeck palatoplasty with primary pharyngeal flap for cleft palate before the onset of speech has been performed upon 81 patients. Forty-two have passed the age of five years, when speech can be meaningfully evaluated. Our study deals with thirty-two of these patients; ten have been excluded from the study because of mental retardation (five patients), flap disruption (three), tracheostomy (one)¹, and death (one)².

SPEECH. The same speech pathologist (P.D.B.) has recorded and evaluated the speech on all of the patients. Language and voice-articulation characteristics were rated on a five-point scale: *one*, considerably above average; *two*, slightly above average; *three*, average; *four*, slightly below average; and *five*, considerably below average.

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¹ For congenital laryngomalacia. Previous tracheostomy for similar condition had been performed prior to cleft palate surgery.

² From a cause unrelated to the patient's anomaly.

Characteristics rated were *volume* (weak and fading, adequate, overly-loud); *pitch* (high, appropriate, low); *voice quality* (breathy, thin, husky, strained, hoarse, hypernasal, hyponasal, dysphonic, clear, glottal); *rate* (fast, slow, varied with stress); *rhythm* (smooth, choppy, measured); and *articulation* (omissions, substitutions, additions, blurred, slack, overly-precise, glottal substitutions). All of our patients in the study have been evaluated upon many occasions. Some of the evaluations were between evaluation points (not *one* or *two*, but *one-two* or *two-three*); when that occurred, we put the patient in the lower category. The distribution of patients in the various categories is as follows: three patients were judged to show skills considerably above average (value of *one*); 26 had skills slightly above average; three had average skills (ratings of *two-three*), 0 had skills slightly below, and 0 had skills considerably below average.

HEARING. All patients were tested audiometrically, some on many occasions. Twenty had no hearing loss, six had less than 15 dB loss, five had losses between 15 and 30 dB, and none had a hearing aid.

DENTAL. Most of the patients were evaluated for occlusal position by the same orthodontist at the age of four years or older. Fourteen had normal occlusions, six had anterior crossbites, three had unilateral total collapse, two had bilateral total collapse, and none had bilateral total collapse with premaxillary malposition. Seven had clefts of the secondary palate only.

Summary

Forty-two patients with primary pharyngeal flaps were evaluated. The results seem to indicate the following. a) The velum cum flap is longer than one would normally expect, presumably because it is tethered posteriorly and is endowed with an augmented blood supply. b) Modifying the velopharyngeal valve does not appear to influence speech adversely. c) Using a palatoplasty which minimally denudes the palatal shelves appears to lessen the likelihood of dental collapse. d) Early closure of the palate appears to minimize middle ear disease and hearing loss. e) Closing and lengthening the palate before the onset of speech appears to insure average or better speech.

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