

A Study of the Effect of Palatal and Labial Anesthesia on Stuttering *

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Problem of the study was to note the role of tactile and kinesthetic feedbacks from palate and lips in stuttering. One way of studying this is by disturbing the feedback. This was done by anesthetization of palate and lips separately.

For this purpose, a stutterer and a normal were taken as subjects. Reading and spontaneous speech of the subjects were studied under following conditions :

Condition 1 —Before anesthetization.

Condition 2 —Immediately after anesthetization.

Condition 3 —One hour after anesthetization.

Condition 4 —After complete recovery from anesthetic effect.

These conditions were same for both palatal and labial anesthetic experiments.

Each section had one reading session. Thus eight reading materials were required. To avoid adaptation effect, eight different reading materials comparable to each other in terms of syllable output/minute were chosen using five normal speakers. Normal variation in reading rate was also noted.

Each section had one spontaneous speech session. Possible normal variation in spontaneous speech in terms of syllable output/minute was also noted using same five normal speakers.

The reading and speaking were recorded on Cassette Tapes in each section. They were analysed by three judges for number blocks in each section. After checking intra- and inter-judge reliability, the scores noted by the judges were considered for further analysis.

The findings of this study are :

- (1) There is substantial reduction in stuttering of stutterer under palatal and labial anesthesia.
- (2) Labial anesthesia produced more reduction in stuttering than palatal anesthesia.
- (3) Syllable output of the stutterer increased under palatal and labial anesthesia.
- (4) Labial anesthesia produced more increase in syllable output than palatal anesthesia.
- (5) Palatal and labial anesthesia produced stuttering-like behaviour in normal subject.

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(6) Under labial anesthesia, normal subject showed more blocks than under palatal anesthesia.

(7) Normal subject showed decreased syllable output under both palatal and labial anesthesia.

In conclusion, the results of the present study thus suggest a possible role played by the tactile and kinesthetic feedback from palate and lips in stuttering and normal speech. In other words, the results suggest that tactile and kinesthetic feedbacks from palate and lips play a vital role in triggering and ongoing execution of speech.

The reduction in stuttering under anesthetic conditions in stutterer and presence of stuttering-like behaviour in normal under anesthetic conditions suggest that stuttering may be due to disturbance in tactile and kinesthetic feedback, at least in the present subjects.

The consistent effect of labial anesthesia on stuttering (*i.e.*, more reduction in stuttering under labial anesthesia than under palatal anesthesia) and on normal fluency (*i.e.*, more stuttering-like behaviour in normal under labial anesthesia than under palatal anesthesia) suggest that tactile and kinesthetic feedbacks from lips may be more important than from palate.

Recommendations for Further Research

- (1) Similar study may be conducted on more number of subjects.
- (2) Combined palatal and labial anesthesia on the same subjects may be tried.
- (3) A prosthetic plate covering complete palate may be tried on stutters as a therapeutic device.
- (4) Similar techniques may be tried to cut down the feedback from lips.