

論 文 要 旨

Perceptual and videofluoroscopic analyses of relation between backed articulation and velopharyngeal closure following cleft palate repair

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Purpose: Perceptual and videofluoroscopic (VF) analyses were performed to analyze velopharyngeal (VP) closure motions and tongue backing movement in subjects with postalveolar, palatal, and velar backed articulation (BA).

Materials and methods: For perceptual analysis, the timing of the appearance of BA and the VP closure level of 22 children with BA following palatal repair were compared to those of 17 subjects with normal articulation, 17 subjects with lateral articulation, and 11 subjects with glottal stop. For VF analysis, 16 subjects with BA and two healthy adult males as references were enrolled. On VF images, the proportions of the time required to complete VP closure and the duration of articulation (VPC/DA) were recorded and then analyzed based on the various degrees of tongue backing movement.

Results: The appearance of BA was recognized just after the acquisition of VP closure, and it was later than that of glottal stop and earlier than lateral articulation. On VF images, VP closure was achieved before tongue movement in healthy individuals, but after tongue movement in BA subjects. VPC/DA on articulation of both /ta/ and /sa/ were significantly smaller for healthy individuals than for BA subjects ($P < 0.05$). The timing of the complete VP closure approached that of articulation when the site of articulation shifted posteriorly ($P < 0.01$).

Conclusions: BA may result from precedent tongue backing movement before the completion of VP closure, as a process that may assist the VP closure motion for articulation.