Intervocalic coarticulation across syllables in children with Childhood Apraxia of Speech

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INTRODUCTION

The present study is a follow-up of a previous study on intervocalic coarticulation in children with speech production in Childhood Apraxia of Speech (CAS), that is, it relates to a previous study on intervocalic coarticulation, as well as the developmental status of children with CAS (Bonaventura et al., 2007). The present study was designed to investigate the existence of coarticulation, coarticulatory actualization and coarticulatory coordination in children with CAS, and to assess the validity of the developmental status of children with CAS. The study focused on children with CAS, as well as normal children, who were matched in terms of age, language and gender.

In particular, six production children were observed, as typified by the major perspective by Spary et al. (2003), or by the developmental status of children with CAS, as well as the developmental status of children with CAS who were matched in terms of age, language and gender. These children were observed in different recording conditions, and the observations were recorded in terms of the following criteria: (1) the effects of intersyllabic and intrasyllabic coordination were measured by the F2 trajectories for 3 words and 3 nonsense words. The effects were observed in speech and non-speech samples. To verify whether some errors in gestural coordination could contribute to the disruption of intergestural coordination, the study focused on productions by three children with CAS and by normal children.

The goal of the present study is to observe the development of the internal coordination of vowels and consonants across syllables in children with CAS, and to determine the effects of intersyllabic and intrasyllabic coordination on the production of speech sounds.

RESULTS

Children with CAS and normal children were compared in three time periods and between CAS and normal children. The F2 trajectory across syllables in children with CAS was found to be significantly different between CAS and normal children.

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METHOD

Subjects and speech samples

Speech samples from 3 children with CAS and 3 age-matching normal children were observed at three time points: (1) T1, 2.5-3 years old; (2) T2, 4-5 years old; (3) T3, 5-6 years old. The speech samples were recorded by 3 children with CAS and by 3 age-matching normal children, who were matched in terms of age, language and gender. The speech samples were recorded in different recording conditions, and the observations were recorded in terms of the following criteria: (1) the effects of intersyllabic and intrasyllabic coordination were measured by the F2 trajectories for 3 words and 3 nonsense words. The effects were observed in speech and non-speech samples. To verify whether some errors in gestural coordination could contribute to the disruption of intergestural coordination, the study focused on productions by three children with CAS and by normal children.

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