INDIAN JOURNAL OF APPLIED LINGUISTICS
VOL. 32, NO. 1 & 2, JAN-DEC 2006

Relational Speech Timing in Dysarthria Associated with Cerebellar Lesions in Different Loci: Word Context

VANDANA V. P.
R. MANJULA
All India Institute of Speech and Hearing, Mysore, India

ABSTRACT

Cerebellum plays an important role in speech motor control. Various tasks like sustained phonation, diadochokinesis and conversation have been used to tap the speech timing abilities of dysarthric clients with cerebellar lesion. It has recently been proposed that not all areas of the cerebellum may be involved in speech motor control; especially aspects concerned with timing of speech events. In the present study, the timing of articulatory movements in three clients with lesions restricted to different cerebellar loci was investigated. A relational speech timing paradigm was used to investigate initial syllable vowel duration (ISVD) in these three clients. The findings were compared with 15 age and gender matched controls. The results suggest that subjects with cerebellar right hemispheric cerebellar lesion showed reduced preservation of relational timing measures as compared to cerebellar vermis lesion i.e. midline structures and cerebellar left cerebellar hemispheric lesion, thus indirectly suggesting a differential loci specific control in cerebellum for relational speech timing.

Key words: Cerebellum, Cerebellar Hemisphere, Cerebellar Vermis, Relational Speech Timing.

INTRODUCTION

Dysarthria refers to a group of speech disorders characterized by disturbance in muscular control due to damage to the central or peripheral nervous system leading to paralysis, paresis, weakness, slowness, lack of coordination and/or altered tone of speech