

## Voluntary and Automatic Respiratory Failure after Unilateral Medullary Infarct -A Case Report-

In-Uk Song, M.D., Jong-Seok Jae, M.D., Bo-Ram Lee, M.D.,  
Tae-Kyeong Lee, M.D., Moo-Young Ahn, M.D., Hyung-Kook Park, M.D.

Department of Neurology, College of Medicine, Soonchunhyang University

Medullary respiratory centers are composed of two respiratory groups: dorsal and ventral. A dorsal respiratory group consists primarily of inspiratory neurons. A ventral respiratory group consists both of inspiratory and expiratory neurons. A direct infarction of their structure may lead to a complete loss of respiratory drive involving both automatic and voluntary components. A 78-year-old man was admitted with sudden dysarthria, dizziness, and bilateral ophthalmoplegia. On the second and third hospital day, he nearly had a complete loss of respiratory drive involving both automatic and voluntary components. He did not get the respiratory drive during CO<sub>2</sub> retention while consciousness and motor were preserved. Brain MRI showed unilateral lesions involving the medullary reticular formation, nucleus tractus solitarius, nucleus ambiguus, and nucleus retroambiguus but sparing the corticospinal tract. Unilateral medullary infarction may lead to severe respiratory failures not limited to automatic responses, which differentiates it from Ondine's curse. J Korean Neurol Assoc 18(2):252~254, 2000

**Key Words :** Medulla oblongata, Respiratory center, Cerebral infarction

Manuscript received November 10, 1999.  
Accepted in final form December 24, 1999.  
\* Address for correspondence  
**In-Uk Song, M.D.**  
Department of Neurology,  
Soonchunhyang University Hospital  
Hannam-dong 657, Yongsan-ku, Seoul, 140-743, Korea  
Tel : +82-2-709-9228, Fax : +82-2-709-9226  
E-mail : siuy@chollian.net



