

가 (perinatal asphyxia)
 가 (1).
 가
 , galactose , (fructose
 intolerance)
 가 (2).
 (gluconeogenesis)
 (cortisol)
 가 가

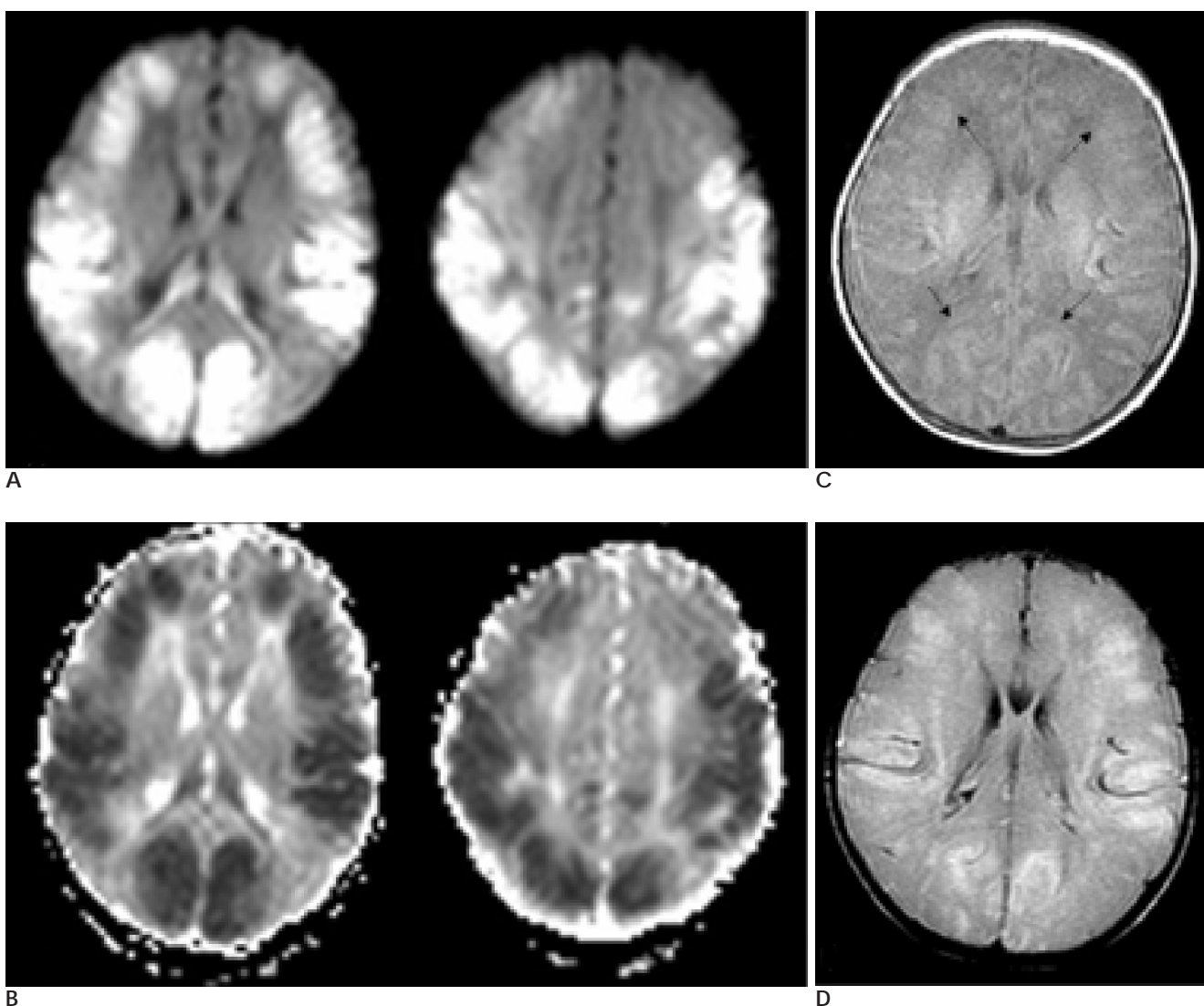


Fig. 1. MR images on 2 days after the onset of neonatal hypoglycemia.

A. Diffusion-weighted images show bilateral high signal intensity lesions in the occipital, parietal, temporal, and frontal lobes.

B. Apparent diffusion coefficient (ADC) maps show low signal intensity lesions on the same regions.

C. T1-weighted image shows unclear differentiation between gray matter and white matter in both occipital and frontal lobes (arrows).

D. Fluid-attenuated inversion recovery (FLAIR) image shows subtle high signal intensity lesions in both cerebral hemispheres.

가 (9), 6

(phosphocreatinine)

2

(adenosine triphosphate, ATP)

가 ,

(arachidonic acid)

(3). , 가

가

Kinnala (10)

(4).

(5),

2가

(1). Barkovich

(6) 5

(1).

6

(globus pallidus)

. Murakami (7)

8

6

, 2

가

. 4

()

(glutamate),

(aspartate)

(excitotoxin)가

(synaptic cleft)

(excitatory amino acids)

가

(postsynaptic neuron)

, N - methyl D - aspartate

excitotoxin

가 가

() ,

(corpus striatum)

(8),

가

가

가

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Diffusion-Weighted Imaging of Brain Injury Due to Neonatal Hypoglycemia: A Case Report¹

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Profound hypoglycemia results in significant brain injury because glucose is essential for normal brain functioning. We present here a case of transient neonatal hypoglycemia with diffuse brain injury. Magnetic resonance imaging was performed 2 days after onset, and this revealed bilateral regions of restricted diffusion in the parietal, occipital, frontal and temporal lobes. On the T1-weighted images, the regions showed indistinct gray matter-white matter differentiation. There were subtle high signal intensity lesions along the corresponding regions of the FLAIR and T2-weighted images.

Index words : Magnetic resonance (MR), diffusion study
Brain, injuries
Magnetic resonance (MR) in infants and children

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