

The Usefulness of Magnetic Resonance Imaging in Children with Strabismus

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Purpose: Brain magnetic resonance imaging (MRI) in strabismus can provide valuable information about structural abnormality. The aim of this study is to evaluate the usefulness of MRI in children with strabismus.

Methods: We reviewed medical records retrospectively in patients diagnosed with strabismus by ophthalmologist and underwent magnetic resonance imaging (MRI) at Pusan National University Hospital from January 2012 to March 2017. According to MRI results, it was classified as normal and abnormal. To compare the characteristics of infantile strabismus and childhood strabismus, it was divided based on the age of one.

Results: Ninety patients were enrolled, 47(52.2%) males and 43 (47.8%) females, with mean age of 2.19 ± 0.53 . Sixty-four patients (71.1%) had normal MRI, whereas 26 (28.9%) patients showed abnormal MRI. Abnormal fundus examination was higher in abnormal MRI group ($p=0.008$). There was no significant association between the types of strabismus and MRI abnormalities. Infantile strabismus were 46 people (51.1%) and childhood strabismus were 44 people (48.9%). Global developmental delay, speech delay and MRI abnormalities were more common in infantile strabismus than childhood strabismus.

Conclusion: MRI would be helpful to conduct an MRI for accurate diagnosis and treatment when the patients had developmental delay, especially speech development, infantile strabismus, or abnormal fundus examination.