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**Evaluation of aqueductal cerebrospinal fluid flow dynamics with phase-contrast cine Magnetic Resonance Imaging in normal pediatric cases**

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**Conflict of Interest**
The authors declare that they have no conflict of interest.

**Abstract**

**Purpose**

This study aimed to determine differences according to age groups and gender in the parameters of aqueductal Cerebrospinal fluid (CSF) flow in childhood using phase-contrast cine Magnetic Resonance Imaging (MRI) method.

**Materials and methods**

This prospective study included 47 boys and 36 girls for a total of 83 healthy children. The cases were divided into 3 groups depending on age as infants (1-12 months), children (12-120 months) and adolescents (120-204 months). To quantitatively evaluate CSF flow, images in the transverse plane were taken at the cerebral aqueduct level using the phase-contrast MR angiography technique in a 1.5T MR unit. Peak and average velocity (cm/s), cranial direction, caudal direction and net volume (ml), and aqueduct area ($mm^2$) were