

소아재활

게시일시 및 장소 : 10 월 19 일(토) 08:30-12:30 Room G(3F)

질의응답 일시 및 장소 : 10 월 19 일(토) 11:00-11:30 Room G(3F)

## **P 3-6**

### **Factors associated with Cardiopulmonary and Physical Fitness in Children with Spastic Cerebral Palsy**

Ja Young Choi<sup>1\*</sup>, Li Hua Jin<sup>1</sup>, Howook Kim<sup>1</sup>, Min Kyun Sohn<sup>1</sup>, Shin-Seung Yang<sup>1†</sup>

School of Medicine, Chungnam National University, Department of Rehabilitation Medicine<sup>1</sup>

#### **Objective**

To investigate the factors associated with cardiopulmonary and physical fitness in children with cerebral palsy (CP).

#### **Design**

Cross-sectional, prospective single center study

#### **Subjects**

Twenty-seven children with spastic cerebral palsy, gross motor functional classification system (GMFCS) level II to IV, aged 3-16 years (mean: 6.6 ± 3.1).

#### **Methods**

The mean and peak VO<sub>2</sub> were obtained with the cardiopulmonary exercise test (CPET) during resting and walking at 1.0 km/h on the treadmill with or without assistance. Multifrequency bioelectrical impedance analysis (BIA) was conducted to assess skeletal muscle mass (SMM) and percent body fat (PBF). In addition, gross motor function measure-88 (GMFM-88) was measured.

#### **Results**

There were no significant group differences in SMM, PBF, or CPET measurements according to GMFCS level. In Univariate linear regression analysis, age and mean VO<sub>2</sub>/kg resting was significantly related with SMM. In multivariable analysis, only age was significantly related with skeletal muscle mass.

#### **Conclusion**

Age was only significant factors associated with muscle mass in children with cerebral palsy. In this study, gross motor function shows no significant relationship with cardiopulmonary functions. However, Further studies in larger groups are needed to delineate the factors associated with cardiopulmonary and physical fitness in children with CP.