walkers, those with GMFCS level II had lower BMD z-scores than children with level I at the distal femur (p-values < 0.004) but not in the LS (p = 0.06). Mean 25-OHD concentration was 45 nmol/L (SD: 18); lower in walkers (mean: 41 nmol/L; SD: 18) than in non-walkers (mean: 53 nmol/L; SD: 19; p = 0.041). There was no correlations between 25-OHD and BMD.

Conclusions The main predictor of low BMD was the inability to walk. Children with GMFCS level II had considerably lower BMD than children with level I. The majority of the CP children had insufficient vitamin D status; however, no correlation between vitamin D status and BMD was observed.

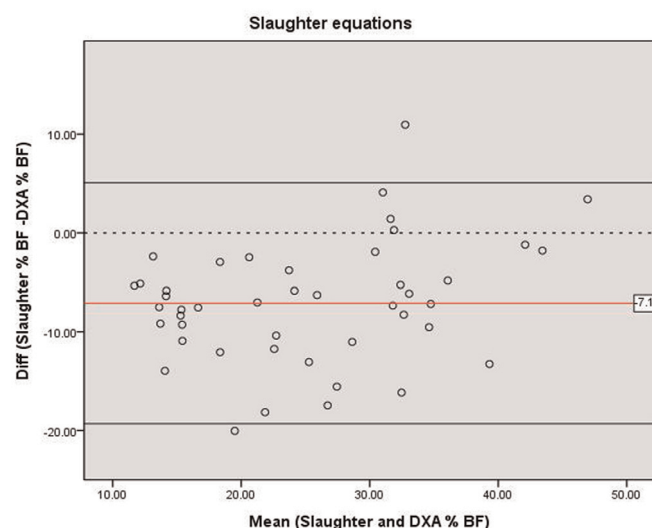**PO-0829** | **ASSESSMENT OF BODY FAT PERCENTAGE IN CHILDREN WITH CEREBRAL PALSY**

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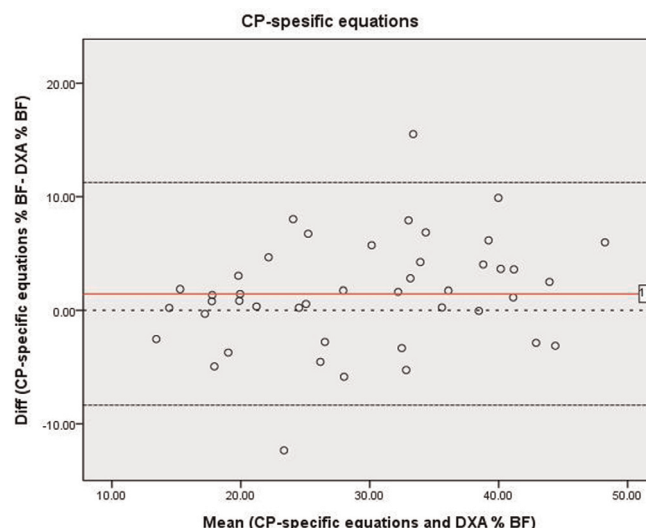
Background and aim Children with cerebral palsy (CP) have higher risk for malnutrition and poor growth; however, it is difficult to assess nutritional status. The aim was to assess body fat percentage based on anthropometric measurements and compare it with direct measurement of percentage body fat with dual X-ray absorptiometry (DXA) in children with CP.

Methods Forty-seven children (age range: 8–18 years; 18 girls) with CP participated and had their body fat percentage measured using DXA. Body fat percentages were estimated from triceps and subscapular skinfolds using standard (Slaughter *et al*.) and CP-specific equations (Gurka *et al*.). Differences and agreement between DXA and skinfold body fat percentage were analysed by comparing mean differences by Bland-Altman plots.

Result The CP-specific equations (r = 0.883) and the standard equations (r = 0.819) had excellent correlation coefficient with DXA fat percent. The standard equations underestimated body fat percent (mean difference: -7.1%) measured by DXA (Figure 1). In contrast, the mean difference between fat percent calculated by the CP-specific equations and by DXA differed marginally (+ 1.4%) (Figure 2).

Conclusion Accurate measures of body fat percentages may be obtained using two skinfold measurements with the CP-specific equations in children with CP.

Abstract PO-0829 Figure 1

Abstract PO-0829 Figure 2

PO-0830 | **IS THERE ANY CORRELATION BETWEEN POLYMORPHISM C677T METHYLENETETRAHYDROPHOLATE REDUCTASE (MTHFR) GENE AND HOMOCYSTEINE LEVEL IN CEREBRAL PALSY?**

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Background Cerebral palsy (CP) is common cause of disability in children. The aetiology of cerebral injury in CP is multifactorial, and recent studies suggested that genetic factor maybe contributed to the development of CP. Polymorphism C677T MTHFR gene influenced homocysteine metabolism that has neurotoxic effect.

Aim This is a preliminary study. The aim of this study was to evaluate the correlation between polymorphism C677T MTHFR gene and homocysteine level in CP children in Bandung, Indonesia.

Methods This is the cross sectional study. The CP children, 4–14 years old were analysed C677T polymorphism in the MTHFR gene and homocysteine level. The data of this study were analysed with SPSS program, t-tests were used, and statistical significance was defined as p value ≤ 0,05.

Results Thirty six spastic CP children, GMFCS I-III (22 males and 14 females; mean age 9,8 years) from school for disability children at Cibiru and Suryakanti (centre for children with special needs) in Bandung, Indonesia. There is a heterozigote polymorphism C677T MTHFR gene in 7 children (5 males and 2 females). The mean of homocysteine level is 8,69. We found no significant correlation between polymorphism C677T MTHFR gene and homocysteine level in CP children (p = 0,89)

Conclusion Preliminary data shows no correlation between polymorphism C677T MTHFR gene and homocysteine level in CP