**BACKGROUND:**

Bone growth and mineralization during childhood are now recognized as important for bone health in adulthood, leading to renewed interest in identifying modifiable factors that impact bone mineral density (BMD) in childhood.

Emerging data suggest that duration of breastfeeding may affect BMD in later childhood and adult life. However, such data are sparse and inconsistent.

**OBJECTIVES:**

This study examined the relationship between the duration of breastfeeding and BMD in young Asian children.

**METHODS:**

Subjects

149 healthy children (73 girls, 76 boys; 81 Chinese, 45 Malay and 23 Indian) from the Growing up in Singapore Towards Healthy Outcomes (GUSTO) mother-offspring cohort participated in this study.

Children born from IVF pregnancies and twins were excluded.

Exposure: Duration of Breastfeeding

Duration of any breastfeeding (BF) regardless of exclusivity was categorized into 3 groups;

- Group 1: Shorter duration (never breastfed or breastfed till 3 months)
- Group 2: Intermediate duration (breastfed >3 to 6 months)
- Group 3: Longer duration (breastfed >6 months).

Outcomes of Interest: Dual-energy X-ray Absorptiometry (DXA) Scans

DXA scans of the lumbar spine were performed (Hologic QDR discovery scanner) at age 6 years.

Lumbar spine bone mineral apparent density (BMAD), i.e. volumetric BMD, was estimated from bone mineral content (BMC) and bone area (A) from L2-L4 (BMAC/A). BMAD, areal BMD (aBMD), standard deviation scores (SDS) for BMAD (ZＬBMAD) and aBMD (ZＡBMD) were used as outcomes.

Covariates:

- Co-variates adjusted for in linear regression analyses were maternal ethnicity, pre-pregnancy BMI, smoking, physical activity, mid-gestation 25(OH) vitamin D status and gestational diabetes, along with offspring gestational age at birth, sex and weight on the day of DXA scan.

**RESULTS:**

Malay children and girls had higher lumbar spine BMAD (Figure 1).

**CONCLUSIONS:**

Breastfeeding for longer than 6 months was associated with lower lumbar spine bone mineral apparent density in young children. As society advocates for longer duration of breastfeeding, it may be important to determine interventions to protect bone mineralization in infants through a longer duration of breastfeeding.

**REFERENCE:**