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Breastfeeding behaviour and cardiovascular risk in later reproductive age women

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Cardiovascular disease is the leading cause of death in women worldwide.[1] In addition to the many other health benefits for baby and mother, there is a growing body of data supporting breastfeeding as a risk- reducing factor for women's later cardiovascular health.[2] In this study we examined whether lifetime breastfeeding duration was related to future cardiovascular risk in a cohort of later reproductive age women, as measured by three commonly used risk calculators.

This is a prospective longitudinal cohort study of 168 women from the ROLO Preteen study. The study hypothesis was that longer lifetime breastfeeding duration would be associated with reduced cardiovascular risk score. Demographics, lifestyle and health behaviour data were collected via questionnaires. Anthropomorphic measurements, blood samples and total body DEXA scan for body composition were also collected. Freely available validated online calculators were used to score each participant's 10-year cardiovascular risk using SCORE-2 and QRISK-3, and their lifetime risk using ASCVD. SPSS for Mac V.27 was used for analysis. Univariate analysis was carried out using Chi-square, independent T tests, Mann Whitney U test and one-way ANOVA. Correlations were assessed using Pearson's and Spearman's correlation coefficients.

Mean age was 42.53 (95% CI 41.91-43.62) and median BMI was 26.3 (IQR 5.9). Mean total cholesterol was 4.87 (95% CI 4.72-5.01) and mean HDL was 1.22 (95% CI 1.15-1.29). Median visceral adipose tissue volume was 494cm^3 (IQR 636). 72.6% (N = 122) reported ever breastfeeding. Median lifetime exclusive breastfeeding was 5 weeks (IQR 35; range 0–130) and median lifetime any breastfeeding was 30 weeks (IQR 84.5; range 0–488). 37.5% (N = 63) breastfed for 12 months or greater. Breastfeeding >/=12 months was associated with lower QRISK-3 risk ratio (p = 0.01), and lifetime any breastfeeding duration correlated with a lower BMI (r(df) = −0.241, p = 0.002), lower visceral adipose tissue volume (r(df) = −.249, p = 0.002), higher HDL (r(df) = .157, p = 0.042), lower total cholesterol:HDL (r(df) = −.177, p = 0.021). Lifetime exclusive breastfeeding correlated with lower total cholesterol:HDL (r(df) = −0.159, p = 0.041) and lower BMI r(df) = −0.279 p = <0.001. There was no significant relationship found between ASCVD, or SCORE-2 score and lifetime breastfeeding behaviour.

We found that lifetime breastfeeding for 12 months or longer was associated with reduced risk ratio for cardiovascular disease and stroke compared to healthy matched controls, but other associations with cardiovascular risk profile scores were not found. Any and exclusive lifetime breastfeeding duration both showed a positive dose-response effect on body composition and lipid profile. Women should be counselled about the potential benefits of breastfeeding for their own health in order to make a fully informed decision about feeding their infant.

References

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