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Abstract

Early Feeding Patterns After Pregnancies Complicated by Gestational Diabetes Mellitus †

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† Presented at Australian Breastfeeding + Lactation Research and Science Translation Conference (ABREAST Conference 2024), Perth, Australia, 15 November 2024.

Abstract: Gestational diabetes mellitus (GDM) has been associated with suboptimal breastfeeding outcomes, including low milk supply, and the aetiology of this is not well understood. As postpartum frequency of milk removal is critical to the establishment of milk production, we compared the early feeding patterns of breastfeeding women with and without GDM. Women with GDM (n = 54) and without GDM (n = 54) provided detailed birth and feeding data within 48 hours of birth and at one and three weeks postpartum and measured their 24 h milk production. Sociodemographic characteristics were similar between groups ($p > 0.05$), and GDM was associated with an earlier birth gestation (38.5 ± 0.7 vs. 39.5 ± 0.2 weeks, $p < 0.001$). The median timing of breastfeeding initiation was < 1 h for both groups, yet breastfeeding frequency in the first 24 h was lower in the GDM group (5.9 ± 3.5 vs. 7.8 ± 4.4, $p = 0.016$). Both in-hospital commercial milk formula supplementation (57% vs. 26%, $p < 0.001$) and delayed secretory activation beyond day 4 postpartum (32% vs. 7%, $p = 0.003$) were more prevalent in the GDM group. Combined breastfeeding and breast expression frequencies were similar between groups in the first 24 h ($p = 0.48$) and at one week ($p = 0.46$) and three weeks postpartum ($p = 0.05$). Low milk production (<600 mL/24 h) was more prevalent in the GDM group, i.e., 19/50 (38%) compared to those without GDM, i.e., 8/50 (16%), ($p = 0.006$). Furthermore, four participants with GDM had weaned/withdrawn due to low milk supply, i.e., 23/54 (43%). The prevalence of low milk supply, despite frequent breastfeeding and breast expression across the first three weeks postpartum, suggests that endocrine factors may impair the autocrine control of milk production in some women with GDM.

Keywords: gestational diabetes mellitus; breastfeeding; lactation; feeding patterns

Academic Editors: Nicolas L. Taylor and Debbie Palmer

Published: 8 January 2025

Citation: Perrella, S.L.; McEachran, J.L.; Wlodek, M.E.; Prosser, S.A.; Geddes, D.T. Early Feeding Patterns After Pregnancies Complicated by Gestational Diabetes Mellitus. *Proceedings* **2025**, *112*, 16. https://doi.org/10.3390/proceedings2025112016

Author Contributions: Conceptualization, S.L.P., M.E.W. and D.T.G.; methodology, S.L.P., M.E.W. and D.T.G.; software, J.L.M.; validation, S.L.P.; formal analysis, S.L.P.; investigation, S.L.P. and S.A.P.; resources, S.A.P. and D.T.G.; data curation, J.L.M.; writing—original draft preparation, S.L.P.; writing—review and editing, D.T.G.; project administration, J.L.M.; funding acquisition, D.T.G. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by an unrestricted research grant from Medela AG (Switzerland). The funder had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by The University of Western Australia Human Research Ethics Committee (2019/RA/5/15/1246).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Restrictions apply to the availability of some or all data generated or analyzed during this study. The corresponding author will upon request detail the restrictions and any conditions under which access to some data may be provided.

Acknowledgments: We thank all study participants for their generous contributions to this study.

Conflicts of Interest: D.T.G. declares past participation in the Scientific Advisory Board of Medela AG. S.L.P., J.LM., and D.T.G. are supported by an unrestricted research grant from Medela AG administered by The University of Western Australia. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results. M.E.W. and S.A.P. have no conflicts of interest to declare.