

TABLE 14.14 Lactation Intensity Groups 6–9 Weeks After Delivery and Adjusted Hazard Ratios of the Incidence of Diabetes Mellitus Within the 2-Year Follow-Up Period Among Women Who Had Gestational Diabetes During Pregnancy

| Type of Regression Model | Adjusted Hazard Ratio of Incidence of Diabetes Mellitus Within 2 Years of Follow-Up by Lactation Intensity | | | |
|------------------------------|--|--|---|--|
| | Exclusively Formula <i>n</i> = 153, (95% CI ^a) | Mostly Formula & Inconsistent Lactation <i>n</i> = 214, (95% CI ^a) | Mostly Lactation <i>n</i> = 387, (95% CI ^a) | Exclusively Lactation <i>n</i> = 205, (95% CI ^a) |
| Age-adjusted | 1.00 (reference group) | 0.72 (0.43–1.23) | 0.54 (0.33–0.89) | 0.43 (0.23–0.82) |
| Maternal risk factors (A) | 1.00 (reference group) | 0.64 (0.37–1.12) | 0.54 (0.32–0.92) | 0.46 (0.24–0.88) |
| A + newborn outcomes (B) | 1.00 (reference group) | 0.65 (0.37–1.13) | 0.53 (0.31–0.91) | 0.47 (0.25–0.91) |
| A + B + postpartum lifestyle | 1.00 (reference group) | 0.66 (0.38–1.14) | 0.56 (0.32–0.95) | 0.48 (0.25–0.92) |

^a95% confidence interval.

Modified from: Gunderson EP, Hurston SR, Ning X, Lo JC, Crites Y, Walton D, Dewey KG, Azevedo RA, Young S, Fox G, Elmasian CC, Salvador N, Lum M, Sternfeld B, Quesenberry CP. Lactation and progression of type 2 diabetes mellitus after gestational diabetes mellitus: a prospective cohort study. *Ann Intern Med*, 163(12):889–898. Copyright © 2015 American College of Physicians. All rights reserved. Reprinted with permission of American College of Physicians, Inc.

CASE STUDY 14.3: Retrospective Cohort Study

Modified from: Hansen KW, Sorensen R, Madsen M, et al. Effectiveness of an early versus a conservative invasive treatment strategy in acute coronary syndromes. *Ann Intern Med*. 2015; 163(10):737–746.

This retrospective cohort study investigated the adverse cardiovascular outcomes of an *early invasive treatment strategy* (EITS) in comparison with a *conservative invasive treatment strategy* (CITS) in a national cohort of patients who had been diagnosed with acute coronary syndrome (ACS). EITS was defined as diagnostic coronary angiography within 72 hours of the index hospitalization and cardiac catheterization. The rationale for the study was that randomized clinical trials (RCTs) in the past have reported that, in patients with ACS, EITS has lower mortality and fewer rehospitalizations due to myocardial infarction (MI) than CITS.

The researchers abstracted data on all acute invasive procedures, hospitalizations, and outcomes in patients with ACS from the Danish national registries that hold data on all 5.6 million residents of Denmark. The study included 19,704 patients who were hospitalized with a diagnosis of ACS for the first time between January 1, 2005, and December 31, 2011. Patients in the EITS (*n* = 9,852) and CITS (*n* = 9,852) groups were matched for other variables that could have affected their likelihood of being treated for ACS (propensity score matching). These patients were retrospectively tracked in the data set for rehospitalization due to MI within 60 days of the index hospitalization for ACS, death, or emigration—whichever of the three happened first. The results showed that acute coronary syndrome patients who were subjected to EITS experienced 25% fewer cardiac deaths (hazard ratio = 0.75, *P* < 0.001), 33% fewer myocardial infarction-related rehospitalizations (hazard ratio = 0.67, *P* < 0.001) and 35% fewer all-cause deaths (hazard ratio = 0.65, *P* < 0.001) than those subjected to CITS.

Questions

Question 1. What research question was addressed in this study, or what hypothesis was tested?

Question 2. Who were the study subjects, and how were they identified and followed?

Question 3. What do the results of the study indicate?

Question 4. How much confidence can one have in the results of the study?