

Introduction

Perinatal death from spontaneous preterm birth (SPTB) varies by place of residence in New Zealand. Modifiable risk factors provide potential to prevent perinatal death due to preterm birth, and identification of women at risk, facilitates optimisation of care associated with early birth.

Aims

Identification of risk factors for perinatal death due to SPTB in a multi-ethnic tertiary hospital population with high perinatal mortality.

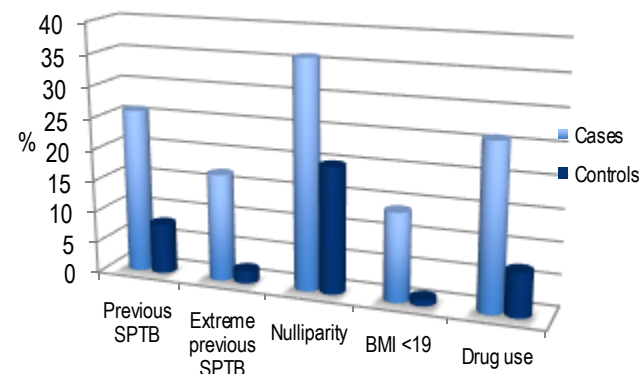
Methods

Case control study, cases being singleton non-anomalous perinatal deaths from 20 weeks gestation due to SPTB from 2014-2016 at Middlemore Hospital, New Zealand. Controls were the two subsequent singleton non-anomalous live births of any gestation in the same population. Data was obtained from perinatal mortality and hospital databases and clinical records pertaining to risk factors in the first 20 weeks of gestation.

Findings

Forty-two deaths from 20–36 weeks (95% at 20-24 weeks) and 84 control live births (3 preterm, 81 term). Previous SPTB (OR 3.90 (95%CI 1.39, 10.99)), extreme previous SPTB at ≤ 28 weeks (OR 8.20 (95%CI 1.62, 41.46)), nulliparity (OR 4.14 (95%CI 1.89, 9.09)), and BMI < 19 (OR of 13.8 (95%CI 1.5, 130)) were associated with perinatal death from SPTB. 28% of cases and 7% of controls used other drugs (mostly alcohol) (OR 4.98 (95%CI 1.68-14.73)) and 31% of cases and 24% of controls smoked tobacco (OR 1.63 (95%CI 0.66, 4.03)). There were no significant associations with ethnicity, socioeconomic status, or with urinary or chlamydial infection in this population. Cases were screened for urinary (83% v 55%) and chlamydial (71% v 36%) infections more often than controls.

Significant risk factors for SPTB perinatal death



Conclusions

Previous extreme SPTB was a major risk factor for perinatal death due to SPTB. Further research is required to better understand the risks for death associated with SPTB.