Abstract

Background International and national New Zealand (NZ) research has identified women of South Asian ethnicity at increased risk of perinatal mortality, in particular stillbirth, with calls for increased perinatal research among this ethnic group. We aimed to analyse differences in pregnancy outcomes and associated risk factors between South Asian, Māori, Pacific and NZ European women in Aotearoa NZ, with a focus on women of South Asian ethnicity, to ultimately understand the distinctive pathways leading to adverse events.

Methods Clinical data from perinatal deaths between 2008 and 2017 were provided by the NZ Perinatal and Maternal Mortality Review Committee, while national maternity and neonatal data, and singleton birth records from the same decade, were linked using the Statistics NZ Integrated Data Infrastructure for all births. Pregnancy outcomes and risk factors for stillbirth and neonatal death were compared between ethnicities with adjustment for prespecified risk factors.

Results Women of South Asian ethnicity were at increased risk of stillbirth (aOR 1.51, 95%CI 1.29–1.77), and neonatal death (aOR 1.51, 95%CI 1.17–1.92), compared with NZ European. The highest perinatal related mortality rates among South Asian women were between 20–23 weeks gestation (between 0.8 and 1.3/1,000 ongoing pregnancies; $p < 0.01$ compared with NZ European) and at term, although differences by ethnicity at term were not apparent until ≥ 41 weeks ($p < 0.01$). No major differences in commonly described risk factors for stillbirth and neonatal death were observed between ethnicities. Among perinatal deaths, South Asian women were overrepresented in a range of metabolic-related disorders, such as gestational diabetes, pre-existing thyroid disease, or maternal red blood cell disorders (all $p < 0.05$ compared with NZ European).

Conclusions Consistent with previous reports, women of South Asian ethnicity in Aotearoa NZ were at increased risk of stillbirth and neonatal death compared with NZ European women, although only at extremely preterm (< 24 weeks) and post-term (≥ 41 weeks) gestations. While there were no major differences in established risk factors for stillbirth and neonatal death by ethnicity, metabolic-related factors were more common among South Asian women, which may contribute to adverse pregnancy outcomes in this ethnic group.

Keywords Stillbirth, Neonatal death, Perinatal mortality, Ethnicity, South Asia, Risk factor, Metabolic disorder, Gestational diabetes, New Zealand