Chances of Stillbirth and Infant Mortality
Increasing with Full Pregnancy

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DOI: 10.29322/IJSRP.13.10.2023.p14214
https://dx.doi.org/10.29322/IJSRP.13.10.2023.p14214

Paper Received Date: 16th August 2023
Paper Acceptance Date: 24th September 2023
Paper Publication Date: 6th October 2023

I. INTRODUCTION

Long-term pregnancies are known to increase the risk of stillbirth. Women are commonly given the option of induction of labor after 41 weeks of pregnancy to prevent this unfavorable outcome. This advice is supported by data showing that the risk of stillbirth increases after 41 weeks. However, 1 in 3 stillbirths happen before 41 weeks of pregnancy. The magnitude and consistency of findings by gestational week in various research on the risk of stillbirth in what is considered to be a normal term gestation differ. Matching newborn mortality estimates are imprecise. We did a systematic analysis to determine the incremental weekly risks of stillbirth in term pregnancies that continue versus deliver at various gestational ages. We also examined the week-specific risks of newborn death by gestational age at birth.

❖ Why was this research conducted?
  ● In the UK, a third of stillborn infants are delivered at term (>37 weeks) and were previously regarded as healthy.
  ● Extending a term pregnancy is a recognized risk factor for stillbirth. In order to prevent stillbirths, women are currently frequently offered induction of labor after 41 weeks of pregnancy. But before this point in pregnancy, 1 in 3 women give birth to a stillborn child.

❖ What did the scientists do and discover?
  ● We discovered that as term gestation progressed, the probability of stillbirth rose steadily. Compared to moms who delivered at 40 weeks, mothers who carried their pregnancies to 41 weeks had a 64% higher chance of stillbirth, with 1 more mother experiencing a stillbirth for every 1,449 women.
  ● Between 38 and 41 weeks, the odds of neonatal death remained stable, and they only started to rise after that point.

❖ What do these results imply?
Each mother who is thinking about continuing her pregnancy past 37 weeks should be made aware of the slight but definite increase in stillbirth risk.

❖ Literature review and topic selection
We looked for studies reporting rates of stillbirth and/or neonatal death at different gestational ages in what appeared to be low-risk term pregnancies in Medline, Embase, and Google Scholar from January 1990 to March 2017, and we updated the search to October 2018. For the population, we used the terms "term pregnancy," "prolonged pregnancy," "post-term," and "postdates," along with terms that were pertinent to the results, such as "stillbirth," "intrauterine death," "fetal death," "perinatal death," and "perinatal mortality." Neonatal mortality, newborn death, and neonatal death were paired with the terms "term pregnancy," "singleton," and "low-risk pregnancy" in a separate search to find studies that solely reported neonatal deaths. There were no limits on languages. We personally searched the references of pertinent studies to find more pertinent material, and when necessary, we contacted the authors and researchers in the field to request additional studies or pertinent information.

❖ Study choice
If cohort studies offered weekly estimates of stillbirths, we included them (including those nested inside randomized trials) on pregnant women at term gestation without a predetermined indication for early delivery. Studies that only included women with pre-existing medical conditions, congenital fetal malformations, complications like preeclampsia, gestational diabetes, or small-for-gestational-age fetuses, or women who required planned delivery before 37 weeks for maternal or fetal reasons were all excluded, as were abstracts,
letters, case reports, case series, and animal studies. Pregnancies with a gestational age of 37 completed weeks or more were considered term pregnancies under our definition. A baby dying before birth, including prenatal and intrapartum deaths, was referred to as stillbirth. A neonatal death is any infant loss before the age of 28 days. We defined a low-risk pregnancy as one in which the chance of intrapartum problems is low when a healthy woman with an apparently straightforward pregnancy goes into labor.

II. ANALYSIS

In the first stage, we determined the prospective risk of stillbirth for each gestational week in each study by dividing the number of at-risk pregnancies by the number of stillbirths that occurred during that week. The number of women who were still expecting at the start of the week, minus the proportion of those who gave birth that week, was used to identify the "at risk" pregnancies. The number of deliveries throughout that week was divided by the quantity of infant fatalities that took place during that time. The following stage was computing the risk ratio to assess changes in the overall week-specific risk of the event (stillbirth or neonatal death) between 2 consecutive weeks (RR). We divided the week-specific risks that were discovered after the respective logistic models were fitted to determine the RR. We also calculated the number of pregnancies at risk for each gestational week, or the number of pregnancies that, if carried to the following week, would result in an additional stillbirth compared to delivery at that gestational week.

III. RESULTS

Only singleton pregnancies were included in 10 of the 13 research, pregnancies complicated by congenital fetal deformities were eliminated from 6 studies, and women without any medical difficulties were included in 4 studies. Just rates of neonatal death were reported in one study, rates of stillbirth were reported in twelve research, and rates of both stillbirth and neonatal death were reported in four studies. Data from four studies were used to examine the weekly chances of stillbirth for Black and White women, as well as for White and Asian women. The definitions of stillbirth and neonatal death used in the research did not significantly differ from one another. Clear definitions of stillbirth and infant death were provided by ten studies. Three studies employed registry entry data on stillbirth and infant death for analysis. Details of each study included in the systematic review and meta-analysis of stillbirths and neonatal mortality in full-term pregnancies

Characteristics of individual studies included in systematic review and meta-analysis of stillbirths and neonatal deaths in pregnancies continued to term.
Risk of at term stillbirth

In the studies, the risk of stillbirth at term ranged from 1.1 to 3.2 per 1,000 pregnancies. From 0.11 per 1,000 pregnancies at 37 weeks (95% CI 0.07 to 0.15) to 3.18 per 1,000 at 42 weeks (95% CI 1.84 to 4.35), the total prospective risk of stillbirth rose with gestational age.

When pregnancies are carried to 41 weeks, as is now advised, the chance of stillbirth increases by 64% (RR 1.64, 95% CI 1.51 to 1.77, p 0.001) as compared to delivery at 40 weeks.
Neonatological mortality risk at term

For deliveries between 38 and 41 weeks of gestation, the risk of infant death remained unchanged; the risk rose after 41 weeks.

IV. DISCUSSION

In term pregnancies, we discovered that the prospective risk of stillbirth increased with gestational age, while the risk of newborn mortality increased after 41 weeks of gestation. When compared to pregnancies that ended at 40 weeks, which are still regarded as normal term gestations, there was no difference in newborn death, but there was a little but substantial increase in the probability of stillbirth.

Our findings offer the necessary context for interpretation by presenting both absolute and relative increases in the risks.

Each study used a different set of inclusion standards. However, because early delivery was not necessary, all trials included women whose pregnancies extended to term or beyond, a sign of their low-risk status.

Our findings were consistent with earlier research in that we did not notice any appreciable differences in newborn mortality for infants between 38- and 41-weeks’ gestation. It is unknown whether children born at term but before 40 weeks of gestation experience significantly different developmental outcomes from those of children born at that gestational age.

Any conversation with women considering carrying their pregnancy over 41 weeks of gestation should cover the absolute risk increase as well as the impact of inducing labor on the delivery method and perinatal outcomes. To reduce the minor risk of stillbirth, it is necessary to determine whether parents and medical professionals will accept an early delivery at term.

In conclusion, mothers at term who carry their pregnancies to the current recommended gestational age of 41 weeks are at a significantly increased risk of stillbirth, without a corresponding decrease in the risk of newborn death. In term pregnancies, we discovered that the prospective risk of stillbirth increased with gestational age, while the risk of newborn mortality increased after 41 weeks of gestation. When compared to pregnancies that ended at 40 weeks, which are still regarded as normal term gestations, there was no difference in newborn death, but there was a little but substantial increase in the probability of stillbirth. Our findings offer the necessary context for interpretation by presenting both absolute and relative increases in the risks.

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V. CONCLUSION

Our results imply that term pregnancies that last to 41 weeks, as opposed to 40 weeks of pregnancy, are much more likely to result in stillbirth, with no comparable decrease in newborn mortality.

REFERENCES


AUTHORS

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