



REVIEW ARTICLE

Late prematurity: a systematic review^{☆,☆☆}

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KEYWORDS

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Neonatal mortality;
Infant mortality;
High-risk pregnancy

PALAVRAS-CHAVE

Trabalho de parto prematuro;
Mortalidade neonatal precoce;

Abstract

Objective: this study aimed to review the literature regarding late preterm births (34 weeks to 36 weeks and 6 days of gestation) in its several aspects.

Sources: the MEDLINE, LILACS, and Cochrane Library databases were searched, and the references of the articles retrieved were also used, with no limit of time.

Data synthesis: numerous studies showed a recent increase in late preterm births. In all series, late preterm comprised the majority of preterm births. Studies including millions of births showed a strong association between late preterm birth and neonatal mortality. A higher mortality in childhood and among young adults was also observed. Many studies found an association with several neonatal complications, and also with long-term disorders and sequelae: breast-feeding problems, cerebral palsy, asthma in childhood, poor school performance, schizophrenia, and young adult diabetes. Some authors propose strategies to reduce late preterm birth, or to improve neonatal outcome: use of antenatal corticosteroids, changes in some of the guidelines for early delivery in high-risk pregnancies, and changes in neonatal care for this group.

Conclusions: numerous studies show greater mortality and morbidity in late preterm infants compared with term infants, in addition to long-term disorders. More recent studies evaluated strategies to improve the outcomes of these neonates. Further studies on these strategies are needed.

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Prematuridade tardia: uma revisão sistemática

Resumo

Objetivo: revisar a literatura sobre prematuridade tardia (nascimentos de 34 semanas a 36 semanas e seis dias) em seus vários aspectos.

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Mortalidade neonatal;
Mortalidade infantil;
Gravidez de alto risco

Fonte dos dados: buscas nas bases MEDLINE, LILACS e Biblioteca Cochrane, sem limite de tempo, e nas referências bibliográficas dos artigos encontrados.

Síntese dos dados: muitos estudos mostram aumento na taxa de prematuridade tardia nos últimos anos. Em todas as séries, os prematuros tardios correspondem à maioria dos nascimentos prematuros. Estudos envolvendo análises de milhões de nascimentos comprovam a forte associação entre prematuridade tardia e mortalidade neonatal. Também se observou associação com maior mortalidade infantil e no adulto jovem. Muitos estudos encontraram associação com várias complicações neonatais e com problemas e sequelas de longo prazo, tais como: dificuldades na amamentação, paralisia cerebral, asma na infância, pior desempenho escolar, esquizofrenia e diabetes no adulto jovem. Alguns autores propõem estratégias para reduzir a incidência desses nascimentos ou para melhorar seus resultados: utilização de corticosteroides antenatais; mudança em rotinas de interrupção de gestações de alto risco; mudanças nos cuidados neonatais.

Conclusões: muitos estudos mostram maior morbidade e mortalidade nos prematuros tardios comparados aos recém-nascidos a termo, além de sequelas e complicações de longo prazo. Estudos mais recentes avaliam estratégias para melhorar o prognóstico destes recém-nascidos. Novos estudos com este objetivo são bem-vindos.

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Introduction

Preterm birth, defined as birth before 37 full weeks, remains the leading cause of death and complications in the neonatal period and a major cause of these outcomes in childhood. However, clinical investigations have traditionally focused on premature infants born at a gestational age (GA) of 32 weeks or less, which are obviously at greatest risk. Only recently preterm infants with GA > 33 or 34 weeks have been evaluated more carefully. In practice, newborns with GA of 34 to 36 weeks and six days tend to be considered, both by obstetricians and neonatologists, as having a very similar risk to those born at term.

This attitude is reflected in the obstetrician's routine, for instance, regarding the greater tolerance toward interrupting the pregnancy when there are maternal and/or fetal complications from 34 weeks on,¹ as well as in the neonatologist's routine, regarding the tendency to keep these newborns in low-risk nurseries or rooming-in care² and provide early discharge.³ These practices are due, at least in part, to results of studies by Goldenberg et al.⁴ and by De Palma et al.⁵ These authors evaluated the gain for each additional week of gestation between 22 and 37 weeks in increased survival and decreased risk of complications and/or sequelae. They observed that the benefits become less important and more difficult to detect from 33 to 34 weeks on. However, these authors did not compare these results with those of children born at term.

More recent studies have shown, however, that despite having a lower risk than premature infants with lower GA, preterm infants born between 34 and 36 weeks have a much higher risk of death and complications than those born at term. Moreover, as the number of births at this GA is greater than at younger ages, the absolute number of deaths and complications may also be higher. The concern regarding these findings led the National Institute of Child Health and Human Development of the United States to organize

a working group to study this theme.⁶ At this meeting, it was decided that infants born at 34 to 36 weeks and six days of GA would be called late preterm infants.

Objectives

This review aims to investigate studies about late prematurity, regardless of the issues addressed, also including studies that evaluated strategies to reduce the incidence and the unfavorable outcomes caused by this condition.

Methods

Searches were performed until December of 2012 in the following databases using the keywords listed below:

MEDLINE – late preterm mortality, late preterm morbidity, late prematurity mortality, late prematurity morbidity, late preterm (always using the conjunction ‘‘and’’).

LILACS – *prematividade tardia mortalidade, prematuridade tardia morbidade, prematuro tardio mortalidade, prematuro tardio morbidade, prematuro tardio, prematuridade tardia*, as well as those in English used in MEDLINE (always using the conjunction ‘‘and’’).

Cochrane Library: late and preterm. The references of the articles retrieved were also searched.

To choose the studies for discussion, preference was given to studies with the following characteristics:

- meta-analysis studies;
- studies that excluded malformations and made adjustments for confounding variables;
- studies with larger sample sizes;

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