Neonatal Outcomes in Relation to Timing of Term Cesarean Delivery: An Observational Study

Ali Khairrallah Alzahrani[1,2*]

[1]*Department of Pediatrics, College of Medicine, Taif University, Saudi Arabia*

[2]*Neonatal Intensive Care Unit, King Abdul Aziz Specialist Hospital, Taif, Saudi Arabia*

[*]**Corresponding author**: Ali Khairrallah Alzahrani, Department of Pediatrics, College of Medicine, Taif University, Saudi Arabia; E-mail: alizahrani44@yahoo.com

Received date: September 30, 2017; **Accepted date**: October 27, 2017; **Published date**: November 07, 2017

Copyright: © 2017 Ali Khairrallah Alzahrani. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Aim: To study neonatal outcomes associated with emergency CS performed beyond 37 weeks' gestation.

Methods: This retrospective observational study was conducted at Obstetrics department, King Abdul-Aziz Specialist Hospital, KSA, from the start of July 2015 to the end of September 2016 among women presented for emergency CS beyond 37 weeks' gestation. 1105 cases were eligible for the study. Medical records were reviewed for demographic and clinical data, timing of emergency cesarean deliveries and any adverse neonatal outcomes. Main outcome measures were neonatal adverse outcomes (death, respiratory distress syndrome, neonatal sepsis, neonatal jaundice, cardiopulmonary resuscitation or ventilator support within 24 hours after birth, admission to the NICU) were assessed in relation to the timing of CS.

Results: Gestational age at delivery was divided into two groups: 37-38+6 weeks and 39-40+6 weeks. Most adverse neonatal outcomes were significantly higher with lower gestational age (P-value<0.05).

Conclusion: CS prior to 39 weeks is associated with significant adverse neonatal outcomes. Hence, delaying CS until 39 weeks of gestation in the absence of obstetric or medical indications for early delivery is a must.

Keywords: CS; Neonatal outcomes; Timing of delivery

Introduction

Cesarean section (CS) rates have been increasing all over the world and are now considered an international phenomenon [1]. Although often having a clear indication, cesarean delivery may also be medically unnecessary [2]. In a recent study by Shaaban, et al. they highlighted that lack of knowledge, deficiency in some clinical skills and certain professional attitudes may be behind the surge in CS rates [3,4].

Controversies had been raised in relation to the appropriate timing of CS since performing the operation prior to 39 weeks of gestation has been associated with many neonatal morbidities especially respiratory complications with increasing rates of Neonatal ICU (intensive care unit) admissions [5,6]. Therefore, many guidelines recommend that planned CS should not be routinely carried out before 39 completed weeks of gestation [7-9].

Despite these recommendations, CS prior to 39 weeks is still being carried out [10] and one of the reasons behind such practice is that between 38 and 39 weeks of gestation, approximately 10-14% of women go into spontaneous labor; meaning that a considerable number of women planned for elective CS at 39 weeks will deliver earlier in an unscheduled, frequently emergency setting [11].

Therefore, this study is conducted to assess the effect of timing of emergency CS at term, whether before or after 39 completed weeks of gestation on the neonatal outcomes.

Materials and Methods

After approval of ethics committee of faculty of medicine, Taif University; this retrospective observational study was conducted among women subjected to term emergency CS during the period from the start of July 2015 to the end of September 2016 at Obstetrics department of King Abdul-Aziz Specialist Hospital. This hospital is a tertiary hospital with about 11,000 deliveries per year. During this period a total of 3129 cesarean sections were performed including elective and emergency cesarean sections. Out of this number, 1495 elective CS cases were excluded and the remaining 1634 were emergency CS. Inclusion criteria involved all emergency CS at term (37 weeks and beyond) for any medical or obstetrical conditions that would warrant early or immediate delivery. Women who had multiple gestations or a fetus with a major congenital anomaly, intrauterine fetal death or with incomplete data sets were excluded from the study (n=529). The number of eligible women who were included in the study was 1105; they were subdivided into 649 of had a non-scarred uterus whereas 456 women had a scarred uterus. Outcome measures were the adverse neonatal outcomes in relation to the timing of CS. Neonatal adverse outcomes (death, respiratory distress syndrome, neonatal sepsis, neonatal jaundice, cardiopulmonary resuscitation or ventilator support within 24 hours after birth, admission to the NICU) were also assessed.

The diagnosis of respiratory distress syndrome required signs of respiratory distress, radiological features, and oxygen therapy with a fraction of inspired oxygen (FiO_2) of 0.40 or greater for at least 24 hours [12,13]. Newborn sepsis included both suspected infections (with clinical findings suggesting infection) and proveg 4era k

confirmed

frst 24 hours) with OR ranged from 3.9 for (neonatal jaundice) up to