ABSTRAK BIODATA PENYELIDIKAN

Tajuk Penyelidikan:

RETROSPECTIVE SEVEN YEARS ANALYSIS OF DEXAMETHASONE THERAPY IN PRETERM PREGNANCY ADMITTED TO HOSPITAL UNIVERSITY SAINS MALAYSIA FROM THE YEAR 2003 TO 2009

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Introduction

Prematurity is the main cause of neonatal morbidity and mortality. Antenatal corticosteroid therapy has been shown to markedly reduced complications of prematurity. A complete course of antenatal corticosteroid treatment is recommended to prevent pulmonary complications of preterm infants. Repeating courses of antenatal corticosteroid in mothers who are at risk of preterm delivery is still debatable.

Objectives

The primary objective of the study is to examine the association between different doses of antenatal intramuscular (IM) dexamethasone therapy and fetal respiratory outcomes.

Methodology

Retrospective study on case records of patients who delivered preterm and received antenatal IM dexamethasone therapy in HUSM from the year 2003 to 2009. Those who received IM dexamethasone 12.5 mg upon admission or diagnosis, followed by another dose of IM dexamethasone 12.5 mg, 12 hours later (total of 25 mg per day), is defined to receive a complete course of IM dexamethasone. Those who did not complete two doses of IM dexamethasone 12.5 mg, 12 hours apart is defined to receive incomplete course of IM dexamethasone. Those who were given another doses of IM dexamethasone after 1 week or more of the first course, is defined to receive repeat course of IM dexamethasone. Their babies' case records were reviewed to assess the fetal respiratory outcomes.

Results

We reviewed 927 case records of mothers who delivered preterm in HUSM from the year 2003 to 2009, and 980 case records of their newborns. There were 407 of mothers received incomplete, 484 received complete and 36 received repeat course of IM dexamethasone. Thence, 435 infants exposed to incomplete, 503 infants exposed to complete and 42 infants

exposed to repeated courses of antenatal IM dexamethasone for analysis. There were 61 infants delivered at 24 to 28 completed weeks, 515 infants delivered at more than 28 to 34 completed weeks, and 404 infants delivered at more than 34 to less than 37 completed weeks. In the group of infants who were delivered at more than 28 to 34 completed weeks gestation, a complete course of antenatal IM dexamethasone is significantly associated with better respiratory outcomes compared to those infants who were exposed to an incomplete course of antenatal IM dexamethasone. However, in the group of infants who were delivered at 24 to 28 completed weeks gestation as well as those delivered at more than 34 to less than 37 completed weeks period of gestation, there was no significant association between complete or incomplete course of antenatal IM dexamethasone and the respiratory outcomes.

Conclusions

A complete course of antenatal IM dexamethasone therapy significantly reduces the respiratory complications in the preterm infants delivered at more than 28 to 34 completed weeks period of gestation compared to those who were exposed to incomplete course of antenatal IM dexamethasone.

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BY

DR ROSLAN BIN RIDZUAN

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LIST OF ABBREVIATIONS

APH	Antepartum haemorrhage
CI	Confidence interval
CS	Caesarean section
D & C	Dilatation and curettage
EFW	Estimated fetal weight
GDM	Gestational diabetes mellitus
HRPZ II	Hospital Raja Perempuan Zainab II
HUSM	Hospital Universiti Sains Malaysia
IM	Intramuscular
IUGR	Intrauterine growth restriction
IVH	Intraventricular haemorrhage
MOD	Mode of delivery
NICU	Neonatal Intensive Care Unit
NIH	National Institutes of Health and Human Development
O&G	Obstetric & Gynaecology
PE	Pre-eclampsia
PIH	Pregnancy induced hypertension
POA	Period of amenorrhoea
POG	Period of gestation
PPROM	Preterm prelabour rupture of membrane
RCOG	Royal College of Obstetrician and Gynaecologist

RDS	Respiratory Distress Syndrome
RR	Relative risk
SD	Standard deviation
SGA	Small for gestational age
SPSS	Statistical Package for Social Studies
SVD	Spontaneous vaginal delivery
USA	United States of America
USM	Universiti Sains Malaysia
WHO	World Health Organisation

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ABSTRAK

Pengenalan

Kelahiran pramatang adalah suatu penyebab utama kepada kematian dan kecederaan atau penyakit di kalangan bayi yang baru lahir. Kajian menunjukkan bahawa rawatan kortikosteroid seperti suntikan ubat dexamethasone terbukti dapat mengurangkan pelbagai komplikasi di kalangan bayi yang lahir pramatang. Melengkapkan rawatan kortikosteroid semasa mengandung telah disyorkan kepada ibu – ibu mengandung yang berisiko untuk melahirkan bayi pramatang. Walaubagaimana pun, faedah dan keberkesanan mengulangi rawatan kortikosteroid setelah menerima rawatan lengkap tersebut masih lagi dalam perbahasan di kalangan pakar – pakar perbidanan dan sakit puan.

Objektif

Tujuan kajian ini adalah untuk menganalisa kaitan antara komplikasi system pernafasan di kalangan bayi yang lahir pramatang dengan bilangan rawatan kortikosteroid iaitu dexamethasone yang diberikan kepada ibu –ibu mereka semasa mengandung.

Metodologi

Kajian retrospektif dilakukan ke atas rekod pesakit yang telah melahirkan bayi pramatang dan telah menerima rawatan kortikosteroid semasa mengandungkan bayi tersebut di Hospital Universiti Sains Malaysia (HUSM) dari tahun 2003 hingga tahun 2009. Mereka yang menerima dua suntikan ubat dexamethasone 12.5 mg setiap suntikan dengan selang 12 jam setiap suntikan (25 mg sehari), sebelum bersalin ditafsirkan sebagai menerima rawatan lengkap dexamethasone. Mereka yang hanya sempat menerima satu suntikan dexamethasone 12.5 mg sebelum bersalin ditafsirkan sebagai menerima rawatan tidak lengkap dexamethasone. Manakala mereka yang menerima suntikan ulangan dexamethasone setelah seminggu atau lebih selepas melengkapkan rawatan lengkap tersebut adalah ditafsirkan sebagai menerima rawatan ulangan dexamethasone. Rekod rawatan bayi mereka dikaji untuk melihat komplikasi system pernafasan bayi tersebut.

Keputusan

Kami mengkaji sebanyak 927 rekod ibu-ibu mengandung yang melahirkan bayi pramatang dan sebanyak 980 rekod rawatan bayi mereka di HUSM dari tahun 2003 hingga 2009. Kami dapati sebanyak 407 orang ibu mengandung menerima rawatan tidak lengkap dexamethasone, sebanyak 484 orang ibu mengandung menerima rawatan lengkap dexamethasone, dan sebanyak 36 orang ibu mengandung menerima rawatan ulangan dexamethasone. Ini memberikan kami sebanyak 435 orang bayi dari mereka yang menerina rawatan tidak lengkap dexamethasone, 503 orang bayi dari mereka yang

menerima rawatan lengkap dexamethasone dan sebanyak 42 orang bayi dari mereka yang menerima rawatan ulangan dexamethasone untuk dianalisa. Terdapat 61 orang bayi yang dilahirkan pramatang pada jangkamasa kandungan 24 hingga 28 minggu lengkap, 515 bayi yang dilahirkan pramatang pada jangkamasa lebih dari 28 minggu hingga 34 minggu lengkap, 404 bayi yang dilahirkan pramatang pada jangkamasa lebih dari 34 minggu hingga kurang dari 37 minggu lengkap.

Didapati bayi yang dilahirkan pramatang, pada jangkamasa kandungan diantara lebih dari 28 minggu hingga 34 minggu lengkap, oleh ibu –ibu yang menerima rawatan lengkap dexamethasone mempunyai kadar kejadian RDS yang rendah, memerlukan rawatan surfactant yang kurang, mempunyai purata Apgar skor yang tinggi, memiliki jangkamasa rawatan di NICU yang pendek serta memerlukan jangkamasa bantuan mesin pernafasan yang singkat berbanding bayi yang mana ibu mereka menerima rawatan dexamethasone tidak lengkap. Kesemua perkaitan tersebut adalah signifikan dari segi statistic. Tetapi bagi bayi yang dilahirkan pramatang pada jangkamasa kandungan antara 24 minggu hingga 28 minggu lengkap dan juga pada jangkamasa kandungan diantara lebih dari 34 minggu hingga kurang dari 37 minggu lengkap, perkaitan antara rawatan lengkap atau tidak lengkap dexamethasone dan komplikasi pernafasan seperti yang tersebut di atas adalah tidak signifikan dari segi statistik.

Kesimpulan

Rawatan lengkap dexamethasone berkait rapat dengan pengurangan masalah komplikasi pernafasan di kalangan bayi yang dilahirkan pramatang pada jangkamasa kandungan diantara lebih dari 28 minggu hingga 34 minggu lengkap berbanding dengan perawatan dexamethasone yang tidak lengkap.

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