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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

# قسم

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# The efficacy of dexamethasone on the duration of latent phase during induction of labour: Randomized controlled trial

### AThesis

Submitted for partial fulfillment of master degree in **OBSTETRICS & GYNECOLOGY** 

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#### **List of Abbreviations**

#### Full-term Abbr.

11P-HSD1 lip-hydroxysteroid dehydrogenase

Abdominal circumference AC

American Congress of Obstetricians and Gynecologists **ACOG** 

**ACTH** Adrenocorticotropic hormone Actual date of delivery ADD Amniotic fluid index AFI **AGA** Average for gestational age

AP Activating protein Androgen receptor AR

**ARM** Artificial rupture of membrane

Body mass index BMI RP Blood pressure **BPM** Beats per minute **BPP** Biophysical profile CL Cervical length COX Cyclooxygenase

Corticotrophin releasing hormone **CRH** 

CRH-binding protein CRH-BP CRH-R CRH receptors CS Cesarean section

**CSF** Colony stimulating factor Contraction stress test **CST** Cardiotocography **CTG** 

Cytochrome P450, 17alpha-hydroxylase/17, 20-lyse CYP17

Dendritic cells DCs

**DHEA-S** Dehydroepiandrosterone sulfate DZ/TZ Definitive/transitional zone **EASI** Extra-amniotic saline infusion **EFW** 

Estimated fetal weight

Food and Drug Administration **FDA** 

**FGR** Fetal growth restriction

Fundal height  $\mathbf{FH}$ Fetal heart rate **FHR GBS** Group B streptococci GCs Glucocorticoids GR Glucocorticoid receptor

**GRE** Glucocorticoid responsive elements

Highly significant H.S. **HFA** Human fetal adrenal

Hypothalamic pituitary adrenal HPA

HSD3B2 3-hydroxysteroid dehydrogenase type ^

IL Interleukin
IOL Induction of labor

IUFD Intrauterine fetal demise
IUGR Intrauterine growth restriction

LMP Last menstrual period

*MAS* Meconium aspiration syndrome

m-RNA Messenger-RNA

MSL Meconium stained liquor

*N.S.* Non-significant

*NICE* National institute for health and care excellence

*NICU* Neonatal intensive care unite

**NK T cells** Natural killer T cells

NO Nitric oxide
NST Non-stress test
PE Pre-eclamsia

**PGDH** Prostaglandin dehydrogenase

**PGs** Prostaglandins

**PIH** Pregnancy induced hypertension

**PPH** Postpartum hemorrhage

**PPROM** Preterm pre-labor rupture of membrane

**PR** Progesterone receptor

**PROM** Pre-labor rupture of membrane

**RCOG** Royal College of Obstetricians and Gynecologists

RCTs Randomized controlled trials
RDS Respiratory distress syndrome

RLN Relaxin

SD Standard deviation
SGA Small for gestational age
SP-A Surfactant Protein-A

SVD Spontaneous vaginal delivery
TNF Tumor necrosis factor
TVU Trans-vaginal ultrasound

**US** Ultrasonographic

WHO World health organization

**P-AR** P-adrenergic receptor microgram

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#### **Abstract**

**Background:** Induction of labor is one of the most common interventions practiced in modern obstetrics. In the developed World, the ability to induce labor has contributed to the reduction in maternal and perinatal mortality and morbidity. Aim of the Work: To establish whether the efficacy of dexamethasone on accelerating the duration of latent phase during induction of labour. Patients and Methods: After taking approval of ethical committee in Ain Shams Maternity Hospital, and a verbal consent was obtained from each candidate after explanation of the procedure in details, this randomized controlled trial was conducted on 120 pregnant women whom are admitted for labor induction at Ain Shams University Maternity Hospital. The participants were randomly assigned by computer list into Group I (Dexamethasone group) N=60 and Group II (Control group) N=60. Group I: in which participants received a prefilled syringe with two milliliters (8mg) of dexamethasone intra-muscular (two doses; with interval 12 hours), and the participants of Group II: in which all participants didn't receive dexamethasone or any other cervical ripening agent. Results: The mean values for induction-to-active phase and total duration of labor were significantly lower among women of group I when compared to women of group II [MD (95% CI) -0.68 hours (-0.98 to -0.37), p<0.001 and -0.79 hours (-1.18 to -0.41), p<0.001]. Conclusion: Double dose of intra-muscular injection of two ml. (8mg.) of dexamethasone with intervals of 12 hours between the two doses before induction of labour appears to shorten labor duration.

Key words: dexamethasone, duration of latent phase, induction of labour