

Letter to Editor

Debate over glucocorticoids use in Premature labor?

Taimoor Hassan, School of Pharmacy & School Medicine, Changzhou University, Jiangsu China/ Department of Health Professional Technologies, The University of Lahore

Dear Editor,

Preterm birth (PTB) is one of the world's leading causes of neonatal (0 - 27 days) mortality. The use of glucocorticoids was proved useful among expecting women who had higher risk of Preterm birth.¹

A trial named Antenatal Corticosteroid Trial (ACT) reported worrisome findings insinuating that the use of glucocorticoids caused more harm in low-resource settings than benefits.² The use of glucocorticoids reduced neonatal respiratory distress, intraventricular hemorrhage, necrotic enterocolitis, early neonatal infection, and death. It was also reported that those patients who were administered glucocorticoids had higher mortality rate as compared to placebo group which marked 3 to 5/1000 deaths.³

This dire concern instigated health pantheons to think on it critically, therefore, a new study targeted 3000 pregnant women who hails from low resource settings revealed 4% lower mortalities than its counterpart placebo group that in dexamethasone group, it was also reported that by administering dexamethasone to 25 women, single infantile mortality can be revoked. However, the rate of fatalities, maternal bacterial infection and childhood deaths owing to respiratory distress syndrome in the dexamethasone group was significantly lower than that of the placebo group.^{3,4} Contrary to ACT, the study included patients for whom the treatment was ensured and the minimum level of neonatal attention available. The much-decreased Preterm birth in ACT indicates over-

rtreatment, which may be the cause of the damage observed. Premature death in Pakistan is 0.36 per cent from the most recent report published in 2017. This might be attributed to emotional and physical stress, compromised hemoglobin levels, periodontic diseases, poor maternal nutritional and past history of pre-term delivery statuses during gestation. Dexamethasone may be important intervention to improve PTB outcomes in Pakistan.⁴

Dexamethasone may be important intervention to improve PTB outcomes in Pakistan, as the new clinical test conducted in low-income countries including Pakistan opines that "it will increase the survival of premature babies when administered among pregnant women who are at higher risk of PTB in low-resource settings". It is cost-effective drug which accredits its use in Pakistan. The cost-effective techniques and carefully identified candidates for this pharmacological intervention certainly will lead to a decrease in the worrisome number of PTBs and accompanying mother and neonate problems. Thus, if cautious plans are developed for the use of dexamethasone in obstetrical settings, we may hope to see positive outcomes.⁵

Keywords: Glucocorticoids, Preterm birth.

Acknowledgement:

I would like to acknowledge my teachers prof. Chen Xin, Prof. Xiaojia Huang, Prof. Chao Zhou for their help and support in writing. I would like to thank Madam Sidra Naseem for reviewing this Letter to Editor.

References:

1. Distribution of causes of death among children aged <5 years (%). World Health Organization. [Online] [Cited 2021 August 10]. Available from: [https://www.who.int/data/gho/data/indicators/indicatordetails/GHO/distribution-of-causes-of-death-among-childrenaged-5-years-\(-\)](https://www.who.int/data/gho/data/indicators/indicatordetails/GHO/distribution-of-causes-of-death-among-childrenaged-5-years-(-)).
2. McGoldrick E, Stewart F, Parker R, Dalziel SR. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. Cochrane Database of Systematic Reviews. 2020; (12):1-220.
3. Roberts D, Brown J, Medley N, Dalziel SR. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. Cochrane database of systematic reviews. 2017;(3) :1-197.
4. WHO Action Trials Collaborators. Antenatal dexamethasone for early preterm birth in low-resource countries. New England Journal of Medicine. 2020; 383(26):2514-25.
5. Baig SA, Khan N, Baqai T, Fatima A, Karim SA, Aziz S. Preterm birth and its associated risk factors. A study at tertiary care hospitals of Karachi, Pakistan. JPMA. The Journal of the Pakistan Medical Association. 2013;63(3):414-8.