COMPARISON BETWEEN NITROGLYCERIN DERMAL PATCH AND NIFEDIPINE FOR TREATMENT OF PRETERM LABOR, A RANDOMIZED CLINICAL TRIAL

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Preterm labor and delivery are of the most important complications of pregnancy and play a major role in neonatal mortality and morbidity. Management of preterm labor and prevention from preterm delivery in order to lower these risks have always been under serious concern. The purpose of this study was to compare the effect of nifedipine and nitroglycerin (NG) dermal patch for taking control of preterm labor.

Material and method: The study was performed as a randomized clinical trial on women who had been admitted in the hospital diagnosed with preterm labor. In one group, nitroglycerin (NG) dermal patch and in the other group, nifedipine was prescribed. Then the women of the 2 groups were followed up to delivery and were compared according to arrest of labor for 2 hours, 48 hours, 7 days, gestational age at the time of delivery and their adverse effects. The primary outcome was to postpone delivery for 48 hours in order to have enough time for prescribing corticosteroids.

Results: The women of the 2 groups did not have any significant difference according to age, BMI, primary Bishop Score, gestational age at the time of tocolytic therapy, history of abortion, vaginal or cesarean delivery and preterm labor. In more women in NG group delivery was postponed for 2 hours [59(98.3%) VS 48(80%), p=0.001], for 48 hours [52 women (86.7%) VS 41(68.3%), p=0.016] and also, for 7 days [47(78.3%) VS 37 (61.7%), p = 0.046], than the women in nifedipine group. Gestational age at the time of delivery was higher in NG group (35.6 ± 1.9 VS 34.3 ± 2.05 weeks, p=0.155), however, it was not statistically significant. Apgar score of minute 5, (p = 0.03) and neonatal weight (p = 0.04), were more and cesarean deliveries, NICU admission and duration of NICU stay were less in NG group. Adverse effects were similar, minimal and negligible in both groups.

Conclusion: NG patch is a more effective method for preterm labor control than nifedipine with regards to minimal side effects.