



Maternal and perinatal outcomes of labor induction using NIPPITA classification in Cotonou, Benin

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Objective

The classification system proposed by NIPPITA provides a standardized framework for characterizing pregnant women undergoing induction of labor (IOL), recognized as one of the most common interventions in obstetrics. This study aimed to analyze maternal and perinatal outcomes of IOL at the National University Hospital of Cotonou by using NIPPITA classification system from 2018 to 2022.

Results

The frequency of IOL was 5.4%. The most represented NIPPITA groups were Group 4 (26.1%), Group 5 (13.8%), Group 1 (13.0%), and Group 2 (12.6%). The Bishop score was unfavorable in 94.20% of cases prior to induction.

The cesarean section rate after induction was 22%. Groups with the highest cesarean rates were Group 3 (48.7%), Group 2 (38.5%), Group 8 (33.3%), and Group 1 (29.63%). A statistically significant relationship was found between delivery mode and NIPPITA group classification ($p < 0.001$).

No statistically significant relationship was found between postpartum complications and NIPPITA group classification ($p = 0.49$) or between NIPPITA group classification and a 5-minute APGAR score below 7 (p -value = 0.45).

Key words

Induction of labor, NIPPITA classification, maternal and perinatal outcomes

Methods

Study design : We performed a retrospective cohort study over a five-year period, from January 1, 2018, to December 31, 2022.

Inclusion criteria: Pregnant women who underwent IOL and medical termination of pregnancy weret heir newborns during this period were included. Inductions for intrauterine fetal death or excluded. Each pregnant woman was classified into a NIPPITA group based on parity, history of cesarean section, gestational age, fetal presentation, and number of fetuses.

Intervention: When indicated, cervical ripening was performed using misoprostol at a dose of 50 µg every 6 hours, not exceeding 200 µg/24 hours, or with a Foley catheter in cases of history of cesarean section.

Data analysis : Pearson's Chi-square test or Fisher's exact test, depending on the case, to compare proportions. A p -value < 0.05 was considered statistically significant.

Conclusion

The classification of NIPPITA is a simple tool. It may be recommended for use in maternity units in Benin to evaluate and improve practices related to IOL

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