

## The Effectiveness of Multiple versus Once-Only Membrane Sweeping in Uncomplicated Primi Gravida at 40 Weeks of Gestational Age in a Tertiary Care Hospital, Sri Lanka: A Randomized Controlled Trial

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**Abstract :** Introduction: Sweeping of the membranes is a fairly simple technique that may positively influence the shift from maintenance of pregnancy to the beginning of labor. Objective: To assess the effectiveness and acceptability of twice versus once-only membrane sweeping in uncomplicated primi gravid at 40 weeks of gestational age in a tertiary care hospital in Sri Lanka. Methods: A randomized controlled clinical trial was done in Ward 05 of Teaching Hospital, Kandy. The participants were primi-gravida with a singleton live fetus who was at 40 weeks of gestation with intact fetal membranes and with a Modified Bishop's score <5. After randomization both groups received membrane sweeping at 40 weeks of gestation and the experimental group received membrane sweeping after 48 hours (40+2 days). The modified Bishop Score was assessed at 40+5 days. In two groups who did not go into natural labor at 40+5 days were managed according to the ward policy of cervical ripening and with labor induction at 40+5 days. Two different methods were used to assess discomfort and pain. Patient acceptability was assessed using recommendation to another patient and acceptance during next pregnancy. Perinatal, maternal and labour outcomes were assessed. Results: A change of the Bishops score was 67.3% (n= 31 of 46) in experimental group whereas in control group it was 57.5% (n= 38 of 66). (p = 0.21, OR=1.52, CI = 0.6 -3.34). Mean (SD) of Modified Bishop score was 6.36 (1.94) in experimental group and 6.03 (.84) in control group (p = 0.354). The probability of having the spontaneous onset of labour in experimental group was 61.6% (n=74 of 120) whereas in control group it was 45% (n= 54 of 120) (p=0.01, OR=1.966, CI = 1.17 - 3.28 NNT = 5.99). Recommending the method to another among experimental group was 75% (n= 90 of 120) whereas in control group it was 79.2% (n= 95 of 120) (p= 0.443). Accepting membrane Sweeping for subsequent pregnancy among experimental was 72.5% (n=87 of 120) whereas in control group was 72.5% (n=87 of 120) (p= 1.00) Need of formal induction of labour at 40+ 5 days in experimental group was 38.4% (n=46 of 120) whereas in control group was 61.6% (n=66 of 120) (p=0.01, OR=0.5, CI= 0.3 - 0.8, NNT=6). Neonatal outcome, labour outcome such as Cesarean-section rate, need for augmentation and maternal complications such as fever, Premature rupture of membrane, bleeding were comparable in two groups. Conclusions and Recommendations: It can be concluded that twice sweeping of membrane was effective to reduce the need of formal induction of labour and increase the chances of having spontaneous onset of labour (SOL) at 40+5 days without increasing maternal or fetal morbidity. Acceptability of twice sweeping is not different from sweeping once. Hence we recommend consideration of multiple membranes sweeping as first line for women at 40 weeks of gestation.

**Keywords :** acceptability, induction, labour, membrane sweeping

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