

## **ABSTRACT**

**Introduction:** Oxytocin administration directly to the umbilical vein is a known management of the retained placenta. Injecting solution via a tube passed along the umbilical vein is known to improve the passage of oxytocin to the villous capillary level of the placenta, where the mechanism of separation takes place.

**Objective :** To determine whether the injection of a high dose ,30 International units (IU ) of oxytocin, to umbilical vein in 30 millilitres (ml) oxytocin and normal saline solution through a feeding tube inserted into the umbilical vein is more effective in the management of retained placenta compared with direct injection of oxytocin solution to the umbilical vein .

**Design & setting:** A randomized controlled trial done at De Zoysa Maternity Hospital, Colombo and University Obstetric Unit, Colombo South Teaching Hospital, Kalubowila Sri Lanka from 01<sup>st</sup> August 2007 to 31<sup>st</sup> July 2008.

**Method:** Seventy women with retained placentae for 20 minutes or more and who fulfilled a pre determined criteria were randomized to two groups with the intervention group getting umbilical vein administration of 30 IU of oxytocin in 30 ml normal saline using size 10 infant feeding tube and the control group similar volume of normal saline only in the same way.

**Main outcome measures:** The need of Manual Removal of Placenta as management of retained placenta after 40 minutes following delivery and the time taken for the separation of the placenta within the 40 minutes following the delivery.

**Results:** There was a statistically significant reduction of the need for manual removal of the placenta in the oxytocin treated arm of the study compared with the control (Pearson chi-square value 7.08 with a p (probability) value of 0.008). The relative risk for the need for manual removal in the same group was 0.48 (95% CI (confidence interval) 0.27, 0.86). The number needed to treat (NNT) was 3. The mean time needed for the spontaneous expulsion of the placenta in the oxytocin treated group was less than the control group (8.96 versus 10.71 minutes). This was not statistically significant (the estimate for difference -1.76 minutes (95% CI -4.53, 1.02) and the p value 0.20). No relationship between the sexes of the babies or with the parity with the outcome was demonstrated.

**Conclusion:** Administration of oxytocin solution of 30 millilitres containing 30 International Units of oxytocin and normal saline via a feeding tube inserted into the umbilical vein appears to be effective in the management of retained placenta. Saline solution alone does not appear to be effective in the management of retained placenta.

**Recommendation:** This method could be introduced as the management of choice for retained placenta in Sri Lanka. However further research involving large randomized multicentre trial with umbilical vein injection of oxytocin with normal saline solution versus normal saline only is warranted

