

RESEARCH PAPER

The effectiveness of uterine packing combined with topical tranexamic acid for the management of primary postpartum hemorrhage

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Abstract

Objectives: the aim of the study is to identify the effectiveness of adding topical tranexamic acid to uterine pack to control primary postpartum hemorrhage PPH compared to uterine packing alone.

Methods: the study included 30 women with intractable primary PPH after vaginal deliveries due to uterine atony in whom the conventional local pathway of management of PPH had failed to control bleeding. In 15 women (the case group), uterine pack impregnated with 20 ml of tranexamic acid(1gm/10ml) was used to control bleeding and compared to 15 women (the control group) in whom uterine pack without tranexamic acid was used, outcome studied include the need for further surgical intervention and the need for blood product transfusion.

Results: although uterine packing impregnated with TXA was successful in controlling bleeding in 13 women out of 15(86.7%) compared to 10 out of 15 cases (66.7%) in women who underwent uterine packing without TXA, however; the difference between effectiveness of each method is statistically insignificant. The requirement for blood product transfusion was less in TXA group.

Conclusion: topical uterine TXA increase the efficiency of uterine tamponade to control PPH, and may decrease the need for more invasive surgical intervention as hysterectomy

Keywords: tranexamic acid, uterine packing, postpartum hemorrhage

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Introduction

Postpartum hemorrhage (PPH) is generally defined as blood loss in excess of 500 ml after vaginal delivery or >1000 ml after cesarean delivery ⁽¹⁾. There is an increase in the incidence of PPH across the world, and it is one of the commonest direct causes of maternal mortality worldwide ^(2,3). Uterine atony is the commonest cause of primary postpartum hemorrhage ⁽⁴⁾. In addition to death, it may result in severe morbidity including disseminated intravascular

coagulation, adult respiratory distress syndrome, shock, infertility, and Sheehan syndrome ⁽⁵⁾.

Tranexamic acid in PPH

Tranexamic acid (TXA) is a synthetic lysine-analogue antifibrinolytic agent, it binds to the lysine binding sites on plasminogen which inhibits plasmin formation. In high concentrations it inhibits plasmin activity and fibrinogenolysis directly, also Tranexamic acid may act through an anti-inflammatory mechanism by inhibiting plasmin-mediated enhancement of complement, monocytes, and neutrophils and it may also act through platelet function improvement ⁽⁶⁾. WHO recommend intravenous tranexamic acid administration within three hours of PPH regardless the mode of