

BACKGROUND:

Traditionally, obstetric analgesia has focused on management of labour pain and on analgesia after caesarean section. Management of pain after episiotomy or repair of perineal tears is significantly important but often less acknowledged. The most commonly used method of reduction of pain during repair of episiotomy involves the use of injectable local analgesic agents. However, other methods such as the use of analgesic spray could also produce significant reduction in pain during such repairs and may be more acceptable to the patient and less cumbersome to administer for the health care personnel. compare the effectiveness of an analgesic spray (10% lidocaine spray) to that of an injectable local analgesic agent (2% lignocaine injection) on the reduction of pain during repair of episiotomy.

A comparative study of the analgesic effects of 10% Lidocaine spray and 2% Lignocaine injection during repair of Episiotomy: A Randomised Blind Controlled Study.

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OBJECTIVES:

The aim of this study was to compare the effectiveness of 2% lignocaine injection and 10% lidocaine spray as analgesia for perineal pain during the repair of episiotomy.

Mechanism of action: The principal mechanism of action of lidocaine as a local anaesthetic is through blockade of voltage-gated sodium channels (VGSCs) leading to a reversible block of action potential propagation.

Methodology: This randomized controlled trial was carried out at the Department of Obstetrics and Gynaecology, Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC), a tertiary healthcare institution in Southwestern Nigeria. Participants were recruited from women who had spontaneous vaginal delivery and had episiotomy. A total of 90 women who met the inclusion criteria and gave written consent to participate in the study were randomized. Each of the patients had both a spray and injection. Selections of these were done at random. The primary outcome measure was mean reduction of episiotomy pain measured by visual analogue scale in the two groups. Secondary outcomes were need for further analgesia, interval between the next required dose(s) and maternal satisfaction. Findings between the two groups were compared. Relevant information on their socio-demographic characteristics using a purpose-designed proforma were obtained and compared.

Findings: All the patients, both in the control group (2% Lignocaine injection) and the intervention group (10% Lidocaine spray) participated actively and completed the study. Both groups experienced significant reduction in the mean pain scores after injection and spray. However, the difference was more pronounced in the 10% Lidocaine spray group than in the 2% Lignocaine injection group. The mean pain score was significantly lower among 10% Lidocaine spray group (p-value <0.002) when compared to 2% Lignocaine injection group at 10, 30 and 120 minutes respectively. At 60 minutes however, the mean pain score was equal in both groups. The duration of analgesic effect lasted beyond 2 hours, but the actual duration could not be determined because the duration of the study did not exceed 2 hours. Majority of the women in the intervention group (10% Lidocaine spray) expressed satisfaction and willingness to use the method in the future.

Patients willingness to receive the same kind of treatment in subsequent pregnancies.



	Group A (Intervention group) N=45	Group B (Control group) N=45	P-value
YES	39(86.7%)	41(91.1%)	<0.001
NO	6(13.3%)	4(8.9%)	

Conclusion: This study demonstrated that 10% lidocaine spray is as effective as 2% lignocaine injection for analgesia during episiotomy. Its effectiveness probably lasts beyond 2 hours, and it is associated with better satisfaction in the mothers as more of them will prefer it in their subsequent deliveries.

Recommendation: Based on the findings in this study, the 10% lidocaine spray may therefore be recommended for use during the procedure of episiotomy to reduce the excruciating perineal pain often experienced by mothers during episiotomy, especially in low resource setting and in places with little or no access to labour and subsequent perineal analgesia. Also, it is more acceptable to women because it avoids the repeated needle pricks of injection and also excellent for women with needle phobia.