

ABSTRAK

Efektivitas Salep Jintan Hitam (*Nigella sativa L.*) Pada Penyembuhan Luka Perineum Ibu Postpartum: kajian angka kuman, kadar TNF- α dan kadar IL-10

Latar Belakang: Saat ini, perawatan luka perineum pada ibu postpartum masih banyak menggunakan cairan desinfektan Povidone-Iodine 10%, meskipun berisiko menyebabkan iritasi. Data menunjukkan bahwa sebanyak 31,7% ibu postpartum masih mengalami luka perineum yang belum sembuh pada hari ketujuh, dan 25% mengalami komplikasi luka. Penelitian telah mengidentifikasi Jintan Hitam (*Nigella sativa L.*) sebagai alternatif perawatan luka yang lebih aman untuk mempercepat penyembuhan dan mencegah komplikasi. Jintan Hitam diketahui mengandung senyawa dengan aktivitas antimikroba, antiinflamasi, dan antioksidan, sehingga berpotensi menjadi pilihan efektif dalam perawatan luka perineum.

Tujuan: Mengevaluasi efektivitas salep Jintan Hitam (JH)-15% pada penyembuhan luka perineum ibu postpartum.

Metode: Sejumlah 81 ibu postpartum dibagi kedalam 3 kelompok (salep JH-15%, salep Povidone-Iodine (PVP-I) 10% dan plasebo) menggunakan single blind randomized pretest-posttest control group design. Kriteria inklusi yaitu primipara dan multipara, luka ruptur perineum derajat II. Salep dioleskan pada luka perineum 2x sehari selama 7 hari. Pengumpulan data meliputi skor REEDA hari ke 1, 3 dan 7, apusan luka perineum untuk menganalisis angka kuman, pemeriksaan kadar TNF- α dan kadar IL-10.

Hasil: Ekstrak *Nigella sativa L.* mengandung flavonoid sebesar 5,2527 mg QE/g dan menunjukkan aktivitas antioksidan yang kuat ($IC_{50} = 19,7088$ ppm). Terdapat perbedaan yang signifikan dalam penyembuhan luka perineum berdasarkan skor REEDA (uji Kruskal-Wallis, One-Way ANOVA, dan uji Friedman; $p \leq 0,001$). Nilai Cohen's d menunjukkan efek besar untuk perbandingan JH vs PVP-I (0,8) dan efek sangat besar untuk perbandingan JH vs plasebo (1,44). Uji regresi logistik menghasilkan odds ratio (OR) sebesar 0,048 (95% CI: 0,006–0,407), yang menunjukkan efek protektif salep JH-15%. Tidak ditemukan perbedaan yang signifikan pada angka kuman luka perineum ($p = 0,436$), kadar TNF- α ($p = 0,090$), dan kadar IL-10 ($p = 0,523$).

Kesimpulan: Salep Jintan Hitam-15% terbukti efektif dalam meningkatkan penyembuhan luka perineum pada ibu postpartum, sehingga dapat direkomendasikan sebagai alternatif perawatan mandiri luka perineum.

Kata kunci: Postpartum, Jintan Hitam, flavonoid, penyembuhan, luka perineum.

ABSTRACT

Effectiveness of Black Cumin Ointment (*Nigella sativa L.*) on Perineal Wound Healing in Postpartum Women: a study of bacterial counts, TNF- α levels and IL-10 levels

Background: Currently, perineal wound care in postpartum mothers still widely utilizes 10% Povidone-Iodine disinfectant solution, despite its risk of causing irritation. Data show that 31.7% of postpartum mothers experience unhealed perineal wounds by the seventh day, and 25% develop wound complications. Research has identified Black Cumin (*Nigella sativa L.*) as a safer alternative for wound care, with the potential to accelerate healing and prevent complications. Black Cumin is known to contain compounds with antimicrobial, anti-inflammatory, and antioxidant activities, making it a promising option for perineal wound care. **Objective:** To analyze the effectiveness of 15% *Nigella sativa* (NS) ointment in perineal wound healing.

Methods: A total of 81 postpartum women were assigned into three groups (15% NS ointment, 10% Povidone-Iodine [PVP-I] ointment, and placebo) using a single-blind randomized pretest-posttest control group design. The inclusion criteria included primiparous and multiparous women with second-degree perineal rupture. The ointment was applied to the perineal wound twice daily for 7 consecutive days. Data collection included REEDA scores on days 1, 3, and 7; perineal wound swabs for bacterial count analysis; and measurements of TNF- α and IL-10 levels.

Results: The extract of *Nigella sativa L.* contained flavonoids at a concentration of 5.2527 mg QE/g and exhibited strong antioxidant activity ($IC_{50} = 19.7088$ ppm). A significant difference in perineal wound healing was observed based on REEDA scores (Kruskal-Wallis test, One-Way ANOVA, and Friedman test; $p \leq 0.001$). Cohen's d indicated a large effect for the comparison between Black Cumin ointment and Povidone-Iodine (0.8) and a very large effect for the comparison between Black Cumin ointment and placebo (1.44). Logistic regression analysis yielded an odds ratio (OR) of 0.048 (95% CI: 0.006–0.407), indicating a protective effect of the 15% NS ointment. No significant differences were found in the bacterial count of the perineal wound ($p = 0.436$), TNF- α levels ($p = 0.090$), and IL-10 levels ($p = 0.523$).

Conclusion: The 15% Black Cumin ointment has been proven effective in enhancing perineal wound healing in postpartum women and can therefore be recommended as an alternative for self-managed perineal wound care.

Keywords: Postpartum, *Nigella sativa L.*, Flavonoid, Perineal wounds, Healing.