

## Aspek kenyamanan pasien luka kronik ditinjau dari transforming growth factor $\beta$ 1 dan kadar kortisol = Identification of comfort level based on transforming growth factor $\beta$ 1 and cortisol levels in patients with chronic wound

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### Abstrak

Kenyamanan merupakan salah satu aspek penting dalam perawatan luka diabetes mellitus (DM). Penelitian ini bertujuan menganalisis ekspresi transforming growth factor beta 1 (TGF  $\beta$ 1) dan kadar kortisol pada perawatan luka teknik modern dan konvensional pada luka DM dikaitkan dengan aspek kenyamanan. Penelitian menggunakan true experimental design dengan metode pengumpulan sampel secara stratified random sampling. Pengukuran ekspresi TGF  $\beta$ 1 dan kadar kortisol dilakukan pada hari ke 0 (pretest) dan 4 (posttest). Sampel yang diambil berasal dari pasien luka kaki DM di Rumah Sakit Saiful Anwar Malang. Ekspresi TGF  $\beta$ 1 diukur dengan metode imunohistokimia, sedangkan pengukuran kadar kortisol dilakukan dengan metode ELISA di laboratorium Fisiologi dan Histologi FK Universitas Brawijaya Malang. Hasil penelitian menunjukkan bahwa pada kelompok modern terjadi peningkatan ekspresi TGF  $\beta$ 1, sedangkan pada kelompok konvensional terjadi penurunan ekspresi TGF  $\beta$ 1. Kadar kortisol pada kelompok modern menunjukkan penurunan lebih besar dibandingkan kelompok konvensional. Hasil uji t menunjukkan ada perbedaan yang signifikan antara perawatan luka teknik modern dan konvensional terhadap ekspresi TGF  $\beta$ 1 dan kadar kortisol pada luka DM (p value < 0,05). Hasil uji korelasi Pearson menunjukkan hubungan yang signifikan antara perubahan ekspresi TGF  $\beta$ 1 dengan perubahan kadar kortisol (p = 0,028). Dapat disimpulkan bahwa teknik perawatan luka secara modern mampu meningkatkan ekspresi TGF  $\beta$ 1 dan menurunkan kadar kortisol dibandingkan teknik konvensional.

*Comfort is one among several aspects that should be considered in the treatment of diabetic wounds. This study aimed to analyze the expression of TGF  $\beta$ 1 and the level of cortisol in modern and conventional wound care techniques of diabetic wounds. TGF  $\beta$ 1 expression and cortisol levels were measured on day 0 (pretest) and 4 (posttest). Samples were taken from patients with diabetic ulcer in the Saiful Anwar District Hospital at Malang. The expression of TGF  $\beta$ 1 was measured by immunohistochemical methods in the Department of Physiology, Brawijaya University Faculty of Medicine. Cortisol level was measured with ELISA method. The results obtained from the modern group were increased TGF  $\beta$ 1 expression and decreased cortisol level. The conventional group yielded decreased TGF  $\beta$ 1 expression and decreased cortisol level. The cortisol level decrease was greater in the modern group. T test results showed no significant differences of modern wound care techniques and conventional on the expression of TGF  $\beta$ 1 and cortisol levels in diabetic wounds (p value < 0,05). Pearson correlation test results showed a significant relationship between changes in cortisol levels with changes in expression of TGF  $\beta$ 1 (p = 0,028). It can be concluded that the techniques of modern wound care is more able to increase the expression of TGF  $\beta$ 1 and to decrease the cortisol levels compared with conventional techniques.*