

PERBANDINGAN PENGARUH JAHITAN ANTARA BENANG *POLYGLECAPRONE* 25 DAN *NYLON* DENGAN TEKNIK *SMALL STICH* KONTINYU TERHADAP EKSPRESI *TRANSFORMING GROWTH FACTOR BETA* PADA GARIS INSISI KULIT ABDOMEN TIKUS ALBINO GALUR WISTAR (*Rattus norvegicus*)

Tantri Bagus Satrio¹, Imam Sofii², Yohanes Widodo Wirohadidjojo³

¹Department Bedah, Rumah Sakit Dr. Sardjito, *Fakultas Kedokteran*, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Divisi Bedah Digestif, Department Bedah, Rumah Sakit Dr. Sardjito, *Fakultas Kedokteran*, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

³Divisi Tumor dan Bedah Kulit, Department Dermatologi dan Venerologi, Rumah Sakit Dr. Sardjito, *Fakultas Kedokteran*, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada, Yogyakarta, Indonesia

Latar Belakang: Penutupan luka abdomen yang ideal akan memberi kekuatan dan menghalangi infeksi. Metode penutupan dinding perut merupakan aspek penting dari penutupan insisi yang efektif, selain pilihan materi untuk menjahit. TGF- β secara umum terlibat dalam proses pada penyembuhan luka. Pemilihan material jahitan adalah salah faktor dalam terjadinya hernia insisional.

Tujuan: Untuk membandingkan *polygecaprone 25* dan *nylon* pada penutupan kulit abdomen.

Metode: Dua puluh tikus digunakan pada dua kelompok. Dilakukan jahitan 5 mm dari tepi kulit. Luka insisi kulit ditutup dengan jahitan kontinyu menggunakan *polygecaprone 25* dan *nylon*. Tikus didekapitasi pada hari ke 4 dan 7. Potongan jaringan diperiksa ekspresi TGF- β dengan imunohistokimia. Perbedaan rerata kelompok dianalisis dengan uji *t*.

Hasil: Tikus pada kelompok *nylon* memiliki ekspresi sel TGF- β pada luka di kulit abdomen tikus yang lebih tinggi dibandingkan kelompok *polygecaprone 25* di hari ke-4 ($p=0,077$), maupun di hari ke 7 ($p=0,107$)

Kesimpulan: Kelompok *nylon* mempunyai ekspresi TGF- β yang lebih tinggi daripada kelompok *polygecaprone 25* namun tidak signifikan secara statistik.

Kata kunci: *polygecaprone 25*, *nylon*, TGF- β , penutupan kulit abdomen

**COMPARISON OF THE EFFECTS OF CONTINUOUS SMALL STICH
TECHNIQUE SUTURE USING POLYGLECAPRONE 25 AND NYLON ON
EXPRESSION OF TRANSFORMING GROWTH FACTOR BETA IN ABDOMINAL
SKIN INCISION LINE IN RATS
(*Rattus norvegicus*)**

Tantri Bagus Satrio¹, Imam Sofii², Yohanes Widodo Wirohadidjojo³

¹Department of Surgery, Dr. Sardjito Hospital, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

²Division of Digestive Surgery, Department of Surgery, Dr. Sardjito Hospital, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

³Division of Tumors and Skin Surgery, Department of Dermatology and Venerology, Dr. Sardjito Hospital, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

Background: The ideal abdominal wound closure will provide strength and prevent infection. The method of closing the abdominal wall is an important aspect of effective incision closure, besides the choice of material for sewing. TGF- β is generally involved in the process of wound healing. The choice of suture material is a factor in the occurrence of incisional hernias.

Objective: To compare polyglecaprone 25 and nylon in abdominal skin closure.

Method: Twenty rats were used in two groups. 5 mm stitched from the edge of the skin. Skin incision wounds are closed with continuous stitches using polyglecaprone 25 and nylon. Rats were decapitated on days 4 and 7. Tissue pieces were examined for TGF- β expression by immunohistochemistry. Mean group differences were analyzed by t test.

Results: Mice in the nylon group had TGF- β cell expression in wounds in the abdominal skin of rats which were higher than the polyglecaprone 25 group on day 4 ($p = 0.077$), and on day 7 ($p = 0.107$)

Conclusion: The nylon group had higher TGF- β expression than the polyglecaprone 25 group but was not statistically significant.

Keywords: polyglecaprone 25, nylon, TGF- β , abdominal skin closure