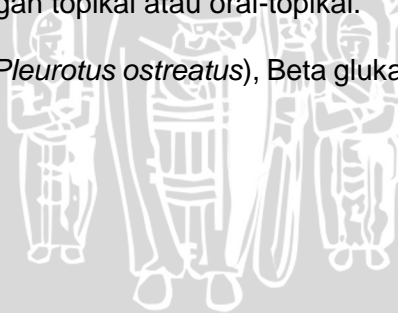


ABSTRAK

Pranata, Yodha. 2016. **Pengaruh Pemberian Ekstrak Jamur Tiram (*Pleurotus ostreatus*) terhadap Peningkatan Jumlah Fibroblas pada Luka Tikus Putih Galur Wistar Model Diabetes Mellitus**. Tugas Akhir, Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Dr. dr. Retty Ratnawati, M.Sc. (2) Ns. Heri Kristianto, S.Kep., M.Kep., Sp.Kep.MB.

Jamur tiram (JT) memiliki kandungan beta glukukan yang tinggi. Menurut penelitian invitro bahwa beta glukukan meningkatkan maturasi *dendritic cell* dan mengaktifasi makrofag yang dapat mensekresi faktor pertumbuhan untuk proliferasi fibroblas. Tetapi pada luka diabetik terlihat adanya disfungsi sel fibroblas. Oleh karena itu, penelitian ini untuk menentukan ekstrak jamur tiram mempengaruhi jumlah fibroblas dalam penyembuhan luka tikus model diabetes. Dua puluh empat tikus dengan berat badan 200-250g dibagi menjadi 6 kelompok. Tikus dibuat luka di punggungnya. Terdapat kelompok kontrol [terdiri dari K1: kontrol negatif, K2: kontrol positif (STZ 45mg/kgBB i.p.+NS), K3: (STZ+NS+Metformin 63mg/kgBB)] dan kelompok perlakuan [terdiri dari P1: (STZ+Oral JT 200mg/kgBB+NS), P2: (STZ+Topikal JT 20%), and P3: (STZ+Oral JT 200mg/kgBB+Topikal JT 20%)]. Kelompok kontrol dan perlakuan dirawat selama 14 hari. Pada akhir penelitian, jumlah sel fibroblas di observasi menggunakan pemeriksaan histopatologi. Analisis statistik menggunakan uji one way ANOVA dan post hoc (tukey). Kandungan beta glukukan pada jamur tiram mampu meningkatkan jumlah fibroblas pada kelompok perlakuan (P1, P2, P3) secara signifikan ($p < 0,05$) dibandingkan dengan kelompok kontrol (K2 dan K3). Kesimpulannya, ekstrak jamur tiram oral mempercepat proses penyembuhan luka diabetes dibandingkan dengan topikal atau oral-topikal.

Kata Kunci: Jamur Tiram (*Pleurotus ostreatus*), Beta glukukan, Penyembuhan Luka, Diabetes, Fibroblas.



ABSTRACT

Pranata, Yodha. 2016. **The Effect of Oyster Mushroom (*Pleurotus ostreatus*) Extract on Wound Healing Process through Increasing Amount of Fibroblast in Diabetic Rats Model**. Final Assignment, Nursing Program, Faculty of Medicine, Brawijaya University. Supervisors: (1) Dr. dr. Retty Ratnawati, M.Sc. (2) Ns. Heri Kristianto, S.Kep., M.Kep., Sp.Kep.MB.

Oyster mushroom (OM) has a high content of beta glucan. Based on in vitro study, beta glucan increase the maturation of dendritic cells and activates macrophages which secretes growth factor to fibroblast proliferation. However in diabetic wound there is a disfunction of fibroblast cells. Therefore, the objective of this study is to determine that OM extract influence wound healing through increasing amount of fibroblast in diabetic rats model. Twenty four males of wistar rats weighing 200-250g were divided into six group. Rats were created wound on the back. The groups were control groups [consist of K1: negative control, K2: positive control (STZ 45mg/kgBW i.p.+NS), K3: (STZ+NS+Metformin 63mg/kgBW)] and the treatment groups [consist of P1: (STZ+Oral OM 200mg/kgBW+NS), P2: (STZ+Topical OM 20%), and P3: (STZ+Oral OM 200mg/kgBW+Topical OM 20%)]. The control and treatment groups were given for 14 days. At the end of study, amount of fibroblast were observed by histopathological examination. Statistical analyzes was used one way ANOVA and post hoc (tukey) test. The Results showed that beta glucan content on oyster mushroom increase amount of fibroblast ($p < 0,05$) in the treatment group (P1, P2, P3) than control group (K2 and K3). In conclusion that the oyster mushroom extract orally accelerates the diabetic wound healing process than topical or oral-topical.

Keywords: Oyster Mushroom (*Pleurotus ostreatus*), Beta glucan, Wound Healing, Diabetes, Fibroblast.

