

# Pengaruh kombinasi laserpunktur dan intervensi diet terhadap kadar gula darah puasa, kadar insulin, waist hip ratio (WHR) dan skor kualitas hidup pasien obesitas di Rumah Sakit Ciptomangunkusumo = Effect of combined laserpuncture and diet intervention on fasting blood glucose levels, insulin levels, waist hip ratio (WHR), Quality of life score in obese patient at RS. Ciptomangunkusumo

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## Abstrak

### <b>ABSTRAK</b><br>

Obesitas merupakan penurunan kualitas hidup, mengganggu emosi dan keuangan individu, keluarga dan sosial mereka. Subjek juga akan mengalami peningkatan resiko yang berkaitan dengan kondisi seperti penyakit jantung koroner, diabetes tipe II, stroke, osteoarthritis dan kanker. <em>Waist hip ratio</em> (WHR), gambaran gula dan insulin dan skor kualitas hidup merupakan indeks yang sering digunakan dalam mengontrol obesitas. Modifikasi diet, intervensi gaya hidup, intervensi farmakologi dan pembedahan merupakan pilihan terapi obesitas, namun pilihan terapi yang aman dan efektif sangat diperlukan. Terapi akupunktur secara signifikan dapat menurunkan indeks massa tubuh dengan mereduksi jaringan lemak viseral abdomen, yang mengarah ke regulasi metabolisme lemak. Laserpunktur merupakan intervensi yang menstimulasi titik akupunktur tradisional menggunakan terapi laser. Dibandingkan dengan akupunktur manual, laserpunktur memiliki berbagai kelebihan seperti aplikasi yang mudah, dosis yang dapat tepat diukur, tidak nyeri dan tidak invasif. Penelitian ini menilai efek kombinasi laserpunktur dan intervensi diet terhadap kadar gula darah puasa, insulin, <em>waist hip ratio</em> (WHR) dan skor kualitas hidup pasien obesitas. Tiga puluh delapan pasien dibagi secara acak menjadi dua kelompok, kelompok laserpunktur dan intervensi diet (n=19) dan kelompok laserpunktur <em>sham</em> dan intervensi diet (n=19). Kedua kelompok menerima intervensi diet dan sesi laserpunktur yang sama, 3 kali/minggu selama 4 minggu. Pengukuran kadar gula darah puasa, insulin, <em>waist hip ratio</em> (WHR) dan skor kualitas hidup dilakukan sebelum dan sesudah sesi terapi. Hasil menunjukkan terdapat perbedaan bermakna pada <em>waist hip ratio</em> (WHR) (p=0,000, CI 95%) dan skor kualitas hidup (p=0,000, CI 95%) antara kelompok laserpunktur dan intervensi diet dengan kelompok laserpunktur <em>sham</em> dan intervensi diet. Kelompok laserpunktur dan intervensi diet juga menunjukkan adanya perbedaan bermakna pada kadar gula darah puasa (p=0,000, CI 95%) dan insulin (p=0,000, CI 95%) sebelum dan sesudah sesi terapi. Penemuan ini menunjukkan bahwa kombinasi laserpunktur dan intervensi diet memberikan efek yang baik terhadap kadar gula darah puasa, insulin, <em>waist hip ratio</em> (WHR) dan skor kualitas hidup pada pasien obesitas.

### <b>ABSTRAK</b><br>

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Obesity is a detriment to quality of life, places emotion and financial burden on the individual, their families, and society. Subjects also have an increased risk of associated conditions, such as coronary heart disease, type II diabetes, stroke, osteoarthritis, and cancers.</em><em> Waist hip ratio (WHR), Glucose and

insulin levels, and quality of life score are the indices commonly used for controlling obesity. Dietary modification, lifestyle interventions, pharmacological interventions, and surgery are treatment choices for obesity, but more safe and effective treatment options are needed. Acupuncture therapy significantly reduces body mass index by reducing the abdominal visceral adipose tissue content, which lead to regulating lipid and glucose metabolism. Laserpuncture is an intervention that stimulates traditional acupoints using laser therapy. Compared to manual acupuncture, laserpuncture has multiple advantages, including ease of application, dose measurement precision, painlessness, and noninvasiveness. This study investigates the effect of combined laserpuncture and diet intervention on fasting blood glucose levels, insulin levels, waist hip ratio (WHR), Quality of life score in obese patient. Thirty eight patients were divided randomly into two groups, laserpuncture with diet intervention group (n=19) and sham laserpuncture with diet intervention group (n=19). Both group received the same diet intervention and sessions of laserpuncture, 3 times/week for 4 weeks. Fasting blood glucose levels, insulin levels, waist hip ratio (WHR), Quality of life score were assessed before and after the treatment course. The result shows there is a statistically significant difference on waist hip ratio ( $p=0,000$ , CI 95%) and quality of life score ( $p=0,000$ , CI 95%) between the laserpuncture with diet intervention group and sham laserpuncture with diet intervention group. The laserpuncture with diet intervention group also shows a statistically significant difference on blood glucose levels ( $p=0,000$ , CI 95%) and insulin level ( $p=0,000$ , CI 95%) before and after treatment course. These findings suggest that combined laserpuncture and diet intervention has good effect on fasting blood glucose levels, insulin levels, waist hip ratio (WHR), Quality of life score in obese patient.