

Perbandingan efek akupunktur manual dengan elektroakupunktur terhadap peningkatan enzim glutathione peroksidase pada subjek perokok = Comparison of manual acupuncture effect and electroacupuncture on serum levels of glutathione peroxidase in smokers / Airine Hendrawan

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Abstrak

[ABSTRAK

Merokok merupakan masalah kesehatan serius di seluruh dunia. Jumlah perokok di Indonesia diperkirakan mencapai sepertiga dari jumlah seluruh penduduk Indonesia, dan sebagian besar memulai merokok pada usia muda. Merokok dapat menyebabkan kerusakan oksidatif pada jaringan dalam berbagai tingkatan akibat meningkatnya radikal bebas dan menurunnya mekanisme antioksidan baik tipe enzimatis maupun non-enzimatis. Banyak penelitian di bidang akupunktur yang dilakukan untuk meneliti efek akupunktur terhadap kadar enzim antioksidan dalam tubuh. Metoda akupunktur manual dan elektroakupunktur frekuensi rendah kerap dilakukan oleh praktisi akupunktur dalam praktek klinik. Penelitian ini bertujuan untuk mengetahui efek dari metode penusukan akupunktur secara manual dan elektroakupunktur frekuensi rendah terhadap peningkatan aktivitas enzim antioksidan Glutathione peroksidase (GSH-Px) di plasma darah. Desain penelitian yang digunakan adalah uji klinis acak tersamar ganda dengan kontrol. Penelitian ini melibatkan 42 subjek perokok yang dibagi menjadi 2 kelompok yaitu kelompok akupunktur manual (n=21) dan kelompok elektroakupunktur frekuensi rendah (n=21). Akupunktur dilakukan pada titik ST36 Zusanli dan SP6 Sanyinjiao bilateral. Hasil penelitian menunjukkan adanya peningkatan kadar Glutathione peroksidase (GSH-Px) yang bermakna pada kelompok akupunktur manual setelah terapi ke-3. Peningkatan kadar GPx juga terjadi di kelompok elektroakupunktur frekuensi rendah namun tidak bermakna secara statistik. Tidak terdapat perbedaan bermakna pada rerata perubahan kadar Glutathione Peroksidase pada kelompok akupunktur manual dibandingkan dengan kelompok elektroakupunktur setelah terapi ke-3 (p=0.176). Kesimpulan penelitian ini adalah akupunktur manual lebih efektif untuk meningkatkan kadar enzim Glutathione peroksidase daripada elektroakupunktur frekuensi rendah.

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ABSTRACT

Cigarette moking is a worldwide serious health problem. Smoking prevalence in Indonesia is approximately one third of all population, and most of them start to smoke since very young age. Smoking can cause oxidative damage in body tissues in various levels due to the increase of free radicals and the

decrease of antioxidant mechanisms of enzymatic and non-enzymatic reactions. Many trials have been conducted to find the acupuncture effect on antioxidant enzymes in the body. Manual acupuncture and low frequency electroacupuncture are often used by acupuncture professionals in clinical practice. The aim of this study is to determine the effect of manual acupuncture and low frequency electroacupuncture on serum levels of Glutathione peroxidase (GSH-Px). The design of the trial is a double-blind randomized controlled trial, involving 42 smokers which randomly allocated into groups of manual acupuncture (n=21) and low frequency electroacupuncture (n=21). Acupuncture was conducted at ST 36 Zusanli dan SP 6 Sanyinjiao bilaterally. The results showed a significant increase of serum Glutathione peroxidase on manual acupuncture group after the 3rd treatment. The increase of serum Glutathione peroxidase was also shown on low frequency electroacupuncture group, but not statistically significant. There was no significant differences on the mean difference of Glutathione peroxidase levels in manual acupuncture group and electroacupuncture group after the 3rd treatment (p=0.176). Conclusion of this study is manual acupuncture found to be more effective in increasing the serum levels of GSH-Px than low frequency electroacupuncture., Cigarette moking is a worldwide serious health problem. Smoking prevalence in Indonesia is approximately one third of all population, and most of them start to smoke since very young age. Smoking can cause oxidative damage in body tissues in various levels due to the increase of free radicals and the decrease of antioxidant mechanisms of enzymatic and non-enzymatic reactions. Many trials have been conducted to find the acupuncture effect on antioxidant enzymes in the body. Manual acupuncture and low frequency electroacupuncture are often used by acupuncture professionals in clinical practice. The aim of this study is to determine the effect of manual acupuncture and low frequency electroacupuncture on serum levels of Glutathione peroxidase (GSH-Px). The design of the trial is a double-blind randomized controlled trial, involving 42 smokers which randomly allocated into groups of manual acupuncture (n=21) and low frequency electroacupuncture (n=21). Acupuncture was conducted at ST 36 Zusanli dan SP 6 Sanyinjiao bilaterally. The results showed a significant increase of serum Glutathione peroxidase on manual acupuncture group after the 3rd treatment. The increase of serum Glutathione peroxidase was also shown on low frequency electroacupuncture group, but not statistically significant. There was no significant differences on the mean difference of Glutathione peroxidase levels in manual acupuncture group and electroacupucture group after the 3rd treatment (p=0.176). Conclusion of this study is manual acupuncture found to be more effective in increasing the serum levels of GSH-Px than low frequency electroacupuncture.]