THE EFFECT OF KURMA SUKKARI EXTRACT (*Phoenix dactylifera L.*) ON THE HISTOPATOLOGY OF THE HEPAR OF ALBINO RATS (*Rattus norvegicus*) SPRAGUE-DAWLEY INDUCED BY MOBILE PHONE ELECTROMAGNETIC WAVES

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Background: Exposure to electromagnetic waves from telephones causes liver damage because they contain free radicals. Sukkari date extract (Phoenix dactylifera L.) contains phenolics, flavonoids, vitamin C, vitamin E, and glutathione which function as antioxidants in reducing cell damage due to exposure to electromagnetic waves on cell phones.
Objective: The purpose of this study was to determine the effect of sukkari date palm extract (Pheonix dactylifera L.) on the liver histopathological features of white rats (Rattus norvegicus) Sprague dawley strain induced by electromagnetic waves from cell phones.
Method: The research design is a post test-only control group design. The number of samples of 25 individuals was divided into 5 groups, namely K1 (aquadest), K2 (Exposure to electromagnetic waves from cell phones), P1, P2, P3 exposed to electromagnetic waves from cell phones for 3 hours per day and date extract with doses (250 mg, 500 mg). , and 1000 mg/KgBW) for 28 days.
Results: The results of the average measurement of rat liver cell damage at K1 = 1.40; K2=2.52; P1=1.76; P2=1.52; P3=1.24. This study used the parametric One Way ANOVA test ($P<0.05$), followed by the Post-hoc LSD test ($P<0.05$). There were significant differences in some groups, except for groups P1 and P2, P2 and P3. After that, the probit test was carried out, obtained ED50 193 mg/KgBB and ED99 398 mg/KgBB.
Conclusion: There is an effect of sukkari date fruit extract (Phoenix dactylifera L) on the liver histolopathological picture of white rats (Rattus norvegicus) Sprague dawley strain induced by cellular telephone electromagnetic waves

Keyword: Sukkari Dates, Liver, Electromagnetic Waves

ABSTRAK

PENGARUH EKSTRAK BUAH KURMA SUKKARI (*Phoenix dactylifera L.*) TERHADAP GAMBARAN HISTOPATOLOGI HEPAR TIKUS PUTIH (*Rattus norvegicus*) GALUR SPRAGUE-DAWLEY YANG DIINDUKSI GELOMBANG ELEKTROMAGNETIK TELEPON SELULER

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Latar Belakang: Paparan gelombang elektromagnetik telepon seluler menyebabkan kerusakan hepar karena mengandung radikal bebas. Ekstrak kurma sukkari (*Phoenix dactylifera L.)* mengandung fenolik, flavonoid, vitamin C, vitamin E, dan glutation yang berfungsi sebagai antioksidan dalam mengurangi kerusakan sel hepar akibat paparan gelombang elektromagnetik telepon seluler.
Tujuan: Untuk mengetahui pengaruh ekstrak buah kurma sukkari (*Pheonix dactylifera L.)* terhadap gambaran histopatologi hepar tikus putih (*Rattus norvegicus*) galur Sprague dawley yang diinduksi gelombang elektromagnetik telepon seluler.
Metode: Rancangan penelitian ini yaitu post test-only control group design. Jumlah sampel 25 ekor dibagi menjadi 5 kelompok, yaitu K1 (akuades), K2 (Terpaparan gelombang eleketromagnetik telepon seluler), P1, P2, P3 terpapar gelombang elektromagnetik telepon seluler selama 3 jam per hari dan ekstrak kurma dengan dosis (250 mg, 500 mg, dan 1000 mg/KgBB) selama 28 hari.
Hasil: Hasil rerata pengukuran kerusakan sel hepar tikus pada K1=1,40; K2=2,52; P1=1,76; P2=1,52; P3=1,24. Penelitian ini menggunakan uji parametrik One Way ANOVA (P<0,05), dilanjutkan uji *Post-hoc LSD* (P<0,05). Didapatkan perbedaan yang bermakna pada sebagian kelompok, kecuali kelompok P1 dengan P2, P2 dengan P3. Setelah itu di lakukan uji probit, didapatkan ED50 193 mg/KgBB dan ED99 398 mg/KgBB.
Simpulan: Terdapat pengaruh ekstrak buah kurma sukkari (*Phoenix dactylifera L*) terhadap gambaran histolopatologi hepar tikus putih (*Rattus norvegicus*) galur Sprague dawley yang diinduksi gelombang elektromagnetik telepon seluler.

Kata Kunci: Kurma Sukkari, Hepar, Gelombang Elektromagnetik