

**PENGARUH PEMBERIAN KUERSETIN ORAL TERHADAP
EKSPRESI INTERLEUKIN-17 JARINGAN KULIT
HEWAN COBA MENCIT PSORIASIS**

TESIS



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HEWAN COBA MENCIT PSORIASIS**

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Abstrak

Latar Belakang

Modalitas terapi oral psoriasis sudah banyak, namun masih dilaporkan memberikan efek samping serta rekurensi sehingga masih menjadi tantangan untuk menemukan pilihan terapi lainnya. Kuersetin berperan sebagai antiinflamasi, sehingga berpotensi menurunkan ekspresi interleukin-17.

Tujuan

Mengetahui pengaruh pemberian kuersetin oral terhadap ekspresi interleukin-17 jaringan kulit hewan coba mencit psoriasis

Subjek dan Metode

Penelitian ini merupakan penelitian eksperimental dengan metode *post-test only control group design*. Subjek penelitian terdiri dari 5 kelompok, dengan 5 ekor mencit setiap kelompok. Semua kelompok diberikan krim imiquimod 5% sebanyak 62,5 mg/hari pada punggung mencit selama 11 hari. Pada hari ke 5-11, kelompok kontrol tidak diberikan kuersetin oral, kelompok 1 diberi kuersetin oral dosis 30 mg/kgBB, kelompok 2 diberikan kuersetin oral dosis 60 mg/kgBB, kelompok 3 diberikan kuersetin oral dosis 120 mg/kgBB dan kelompok 4 diberikan kuersetin oral 240 mg/kgBB. Interleukin-17 dihitung dengan persentase *pixel* luas area ekspresi dibandingkan dengan *pixel* seluruh jaringan epidermis dan dermis.

Hasil

Rerata ekspresi interleukin-17 pada kelompok kontrol, 1, 2, 3, dan 4 secara berturut-turut 27,35%, 21,74%, 18,89%, 18,37% dan 11,10%. Terdapat perbedaan yang signifikan antara kelompok kuersetin oral dosis 30 mg/kg, 60 mg/kgBB, 120 mg/kgBB dan dosis 240 mg/kg BB dengan kelompok kontrol ($p < 0,05$) terhadap penurunan ekspresi interleukin-17 jaringan.

Kesimpulan

Kuersetin oral dapat menurunkan ekspresi interleukin-17 jaringan kulit hewan coba mencit psoriasis.

Kata kunci: antiinflamasi, flavonoid, sitokin

EFFECT OF ORAL QUERSETIN ON INTERLEUKIN-17 EXPRESSION IN THE SKIN TISSUE OF PSORIASIS MICE MODELS

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Abstract

Background

Various therapeutic approaches are available for oral psoriasis; however, side effects and recurrence continue to be reported, making it challenging to determine alternative treatments. Due to its anti-inflammatory properties, quercetin potential to reduce the expression of interleukin-17.

Objective

Assess the effect of oral quercetin supplementation on interleukin-17 expression in experimental psoriatic mouse skin tissue.

Subject and Method

This study uses an experimental methodology using a post-test-only control group design. The experimental subjects were divided into five groups, with five sample in each group. A 5% imiquimod cream was administered topically 62.5 mg daily to induce psoriasis lesion for eleven days. The control group was not administered quercetin orally. The oral quercetin was given to group at doses 30, 60, 120, and 240 mg/kgBW for 7 days. Interleukin-17 is quantified by dividing the pixel count of the expression area by the sum of the pixel counts of the epidermis and dermis tissue.

Result

The mean expression of interleukin-17 in control groups 1, 2, 3 and 4 were 27.35%, 21.74%, 18.89%, 18.37% and 11.10%, respectively. There was a significant difference between the oral quercetin group at a dose of 30 mg/kg, 60 mg/kgBW, 120 mg/kgBW and 240 mg/kgBW and the control group ($p < 0.05$) in reducing tissue interleukin-17 expression.

Conclusion

Oral administration of quercetin can reduce the expression interleukin-17 in the skin tissue of mice with psoriasis.

Keywords: anti-inflammatory, cytokines, flavonoid



