

EFFECT INFLAMMATORY OF LUNASIA AMARA EXTRACT ETHANOLIC ON EXPERIMENTAL CHRONIC ARTHRITIS

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ABSTRACT

The effect of inflammatory of Lunasia amara ethanol extract (LAE) on Freund's complete adjuvant (FCA) induced arthritis was investigated. The inflammatory effect was assessed by measuring the paw volume (hind paw swelling), joint diameter, and body weight of mice. For 60 days observation toward mice which orally administrated of LAE (50, 100, and 200 mg/kg BW per day) after subcutaneous injection with FCA. The arthritis score and paw edema were analyzed and compared with control group. The result suggests that the Lunasia amara Extract ethanolic might be beneficial in the treatment of the chronic inflammatory disorder.

Keyword: Lunasia amara extract ethanolic, chronic inflammation, FCA-induced arthritis

INTRODUCTION

Beta-beta wood is one of the plants of the genus Lunasia family Rutaceae. In general, Family Rutaceae containing compounds essential oils, alkaloids, amides, coumarin, flavonoids, benzoate acids, tannin substances, lignin, phenolic compounds, triterpene tetrasiklik, diterpene, tetraterpen pentacyclic saponins, carbohydrates and slime [1]. Scopoletin is a coumarin derivative which is a derivative of analog. This compound has been found in Rutaceae family and known has anti-inflammatory effect. This research aimed to evaluate the anti-inflammatory activity of beta-beta timber in mice Balb/c model of rheumatoid arthritis induced Complete Freund's Adjuvant (CFA) of 0.1%. The result showed that the reduction of inflammation by ethanol extract LAE reached 77.35% for all treatments.

MATERIAL AND METHOD

Plant Material

The plant of beta-beta wood (*Lunasia amara* Blanco.) collected at Siawung, South Sulawesi province, Indonesia, in March 2014.

Extraction

Process extraction of the plant is done by maceration. Beta-beta wood of 1000 g was extracted by maceration at room temperature with ethanol 96% for 72 hours.

Mode of feeding

The suspension extract a dose of 2 mg / kg BW, 100mg/kg body weight and 250 mg/kg BW and Sodium diclofenac dose of 2 mg/kg BW

administered once daily for 60 days as peroral with a maximum volume of 1 ml/20 g.

Arthritis index measurement edema volume used

The edema vilume was measured using Pletismometer on 0, 7, 14, 21 to 56 day after the induction of Control Freund's Adjuvant (CFA). In preparation for observed histopathology and index arthritis, inflammation, and joint damage.

CONCLUSION

The result suggests that the *Lunasia amara* Extract ethanolic might be beneficial in the treatment of the chronic inflammatory disorder.

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