ABSTRAK

Latar Belakang: Paparan asap rokok dapat menyebabkan terjadinya inflamasi. Salah satu sitokin pro-inflamasi adalah IL-6 dan neutrofil. Zink dan probiotik diketahui memiliki efek anti-inflamasi.
Tujuan: Mengetahui pengaruh pemberian zink dan probiotik terhadap kadar IL-6 dan jumlah neutrofil jaringan paru tikus yang dipapar asap rokok.
Metode: Penelitian ini menggunakan metode *true experimental* dengan desain *post test only control group desain* pada tikus jantan. Sample penelitian sebanyak 30 tikus yang terbagi menjadi 5 kelompok berbeda. K merupakan kontrol normal; K(-) diberikan paparan asap rokok; P1 diberikan zink dan paparan asap rokok; P2 diberikan probiotik dan paparan asap rokok; P3 diberikan zink, probiotik dan paparan asap rokok. Data kemudian diolah dengan uji *One-way ANOVA*.
Hasil: Rerata kadar IL-6 pada kelompok P1, P2 dan P3 lebih rendah dibandingkan dengan kelompok K(-) namun tidak berbeda bermakna. Rerata jumlah neutrofil jaringan paru pada kelompok P1, P2 dan P3 lebih rendah dan bermakna dibandingkan dengan kelompok K(-).
Kesimpulan: Zink dan probiotik memiliki efek anti-inflamasi.

Kata Kunci: IL-6, neutrofil, zink, probiotik, paparan asap rokok

ABSTRACT

Background: *Cigarette smoke exposure may cause inflammation. One of cytokines proinflammation are IL-6 and neutrophile. Zinc and probiotics are known to have an anti-inflammation effect.*
Objective: *To investigate the effect of zinc and probiotics towards IL-6 and lung tissue neutrophils levels in rats exposed to cigarette smoke.*
Methods: *This study used a true expiremental design with post test only control group design in male rats. The research used 30 samples of rats with 5 different treatments. K was normal control; K(-) was exposed to cigarette smoke; P1 was exposed to cigarette smoke and received zinc; P2 was exposed to cigarette smoke and received probiotics; P3 was exposed to cigarette smoke, received zinc and probiotics. The data was processed by One-way ANOVA test.*
Results: *The mean IL-6 levels on P1, P2 and P3 groups were lower than the K(-) group, but no significant difference. The mean lung neutrophils levels on P1, P2 and P3 groups were lower and significantly different than the K(-) group.*
Conclusion: *Zinc and probiotics have anti-inflammatory effect.*

Keywords: *cigarette smoke exposure, IL-6, probiotics, tissue neutrophils, zinc*