

ABSTRACT

EFFECT OF BLACKCUMIN EXTRACT (*Nigella sativa* L.) IN LIVER HISTOPATHOLOGIC APPEARANCE OF MALE RATS (*Rattus norvegicus*) INDUCED BY GENTAMICIN

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Gentamicin is clinically used against bacteria infection, but it's hepatotoxic. This hepatotoxicity is caused by oxidative stress that induced by gentamicin's metabolism. Blackcummin is a traditional drug which usually used to treat some diseases. Blackcummin has antioxidant activity and reduces oxidative stress caused by gentamicin. This study aims to prove the extract of blackcummin's effect on histopathologic appearance of gentamicin-induced liver damage.

This research is preclinical trial with randomized controlled design. Research subjects were used 30 Sprague dawley strain male rats. Rats were divided into 5 groups: group I (aquadest 0,4ml), group II (gentamicin 0,4ml/kgBW/day), group III (blackcummin 500mg/kgBW and gentamicin 0,4ml/kgBW/day), group IV (blackcummin 1000mg/kgBW and gentamicin 0,4ml/kgBW/day), group V (blackcummin 1500mg/kgBW/day and gentamicin 0,4ml/kgBW/day).

Results suggests that there was significant effect of giving the treatment to hepatocyte damage male rats. Group III and IV showed better histopathologic appearance compared to pathologic group (II). This's caused by blackcummin's antioxidant activity, so that the damaged caused by oxidative stress which induced by gentamicin could be reduced. Histopathologic appearance of group V didn't show significant difference compared to group II. The conclusion of this research is blackcummin extract at dose of 500-1000mg/kgBW shown to have hepatoprotector activity against gentamicin-induced liver damage.

Keywords: blackcummin, gentamicin, liver damage, *Nigella sativa* L.