

Research article

Effectiveness of black cumin seed oil (*Nigella sativa* L.) as a gastroprotective in white rats induced by aspirin and gastric histopathology

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Abstract

Objective: Gastric ulcer is damage in mucosal tissue, sub mucosa until the lining of the gastric muscle; the causes of gastric ulcer include gastric acid hypersecretion. Black cumin (*Nigella sativa* L.) seed oil has a gastroprotective effect because it contains *timoquinone* (TQ) compounds. This study aims to determine the gastroprotective activity of black cumin seed oil in rats induced by aspirin. **Method:** Black cumin (*Nigella sativa* L.) seed oil was given in 3 concentration variations, namely 0.025; 0.05; and 0.075 ml/kg. Phytochemical screening tests in black cumin seed oil were carried out which included tests of flavonoids, saponins, tannins and terpenoids. Observations included macroscopic (number of ulcers, pH of ulcer and index of ulcer) microscopically (histopathological test). **Result:** The results of the phytochemical screening test obtained positive results on the test of saponin and terpenoid compounds. While the results of macroscopic observations showed that giving of black cumin seed oil with a concentration of 0.075 ml/kg in rats induced by aspirin showed a more optimal gastroprotective outcome. **Conclusions:** Histopathological tests showed that doses that have a gastroprotective effect can restore mucosal cell cohesion that has been damaged by erosion.