

Erratum

The anti-ulcerative colitis effects of *Annona squamosa* Linn. leaf aqueous extract in experimental animal model: Int J Clin Exp Med. 2015;8(11):21861-21870

Rasha YM Ibrahim, Amal I Hassan, Eithar K AL-Adham

Department of Radioisotopes, Nuclear Research Centre, Atomic Energy Authority, Egypt

Received October 10, 2016; Accepted October 14, 2016; Epub October 15, 2016; Published October 30, 2016

Abstract: This study aimed to evaluate the anti-inflammatory effects of *Annona squamosa* (*A. squamosa*) leaf aqueous extract against acetic acid induced colitis in rats with a trial to explore its use for the treatment of colon inflammation. Sprague Dawley rats weighing 180-200 g were used in this study. Treatment with *A. squamosa* extract at dose 300 mg/kg for 4 weeks counteracted acetic acid induced ulcerative colitis by a significant decrease ($P<0.05$) of colonic tissue of malondialdehyde (MDA) and significant increases of catalase (CAT), glutathione (GSH) and glutathione peroxidase (Gpx) compared to ulcerative colitis control group. Furthermore, induction of oxidative stress was observed in the colonic tissue through the levels of 8-hydroxy-2'-deoxyguanosine (8-OHdG) which significant increase in colonic tissue DNA by acetic acid. Moreover AA induced significant increase in serum interleukin-10 (IL10), tumor necrosis factor- α (TNF- α), transforming growth factor (TGF 1β), and C reactive protein (CRP) as compared to the control group. On the contrary, our results showed AA induced significant decrease of vascular endothelial growth factor (VEGF) and thyroid hormones triiodothyronin and thyroxin (T3 & T4) in installed group with AA as compared to control which significantly improved after treatment with *A. squamosa* leaf extract. Histopathological observation in our study confirmed the biochemical study. Thus, therapeutic method offer a sign to analyze further the effectiveness of *A. squamosa* as a unique agent for alleviating colitis.

Keywords: *Annona squamosa*, natural remedies, ulcerative colitis, free radicals

In this article published in IJCEM, **Tables 1, 2** and "Histological examination" section are changed as follow.

Histological examination

Autopsy samples were taken from the colon of rats in different groups and fixed in 10% formal saline for twenty four hours.

Address correspondence to: Dr. Amal I Hassan, Department of Radioisotopes, Nuclear Research Centre, Atomic Energy Authority, Egypt. E-mail: virtu-alaml@gmail.com

Table 1. Effect of *Annona squamosa* leaf aqueous extract on antioxidants, MDA, IL10, TNF and CRP in control and experimental groups

Groups	Control (I)	Acute colitis (II)	<i>A. squamosa</i> (III)	Treatment (IV)	P
CAT (U/mg)	65.49±4.04 ^a	38.14±5.16 ^c	68.18±4.86 ^a	59.26±4.65 ^a	0.003*
GSH (nmol/mg)	0.67±0.11 ^a	0.23±0.07 ^b	0.59±0.08 ^a	0.55±0.06 ^a	0.014*
GPx (U/mg)	61.50±4.27 ^{ab}	29.81±3.33 ^c	58.42±4.92 ^b	72.09±3.46 ^a	0.000*
MDA (nmol/mg)	12.82±1.39 ^b	72.84±5.68 ^a	15.28±1.68 ^b	21.7±3.13 ^b	0.000*
IL10 (pg/ml)	455.50±18.60 ^b	816.17±14.27 ^a	478.72±12.55 ^b	458.47±11.87 ^b	0.000*
TNF (pg/ml)	8.22±0.86 ^c	36.70±2.67 ^a	10.0±0.82 ^{bc}	14.32±0.98 ^b	0.000*
CRP (ng/ml)	3.59±0.31 ^b	6.56±0.35 ^a	3.79±0.12 ^b	4.66±0.82 ^b	0.001*

Data expressed as mean ± SE; a, b, ab & c: Statistically significant from control or ulcerative colitis group, respectively at P<0.05 using one-way ANOVA followed by Tukey-Kramer as a post-hoc test. (P<0.05).

Table 2. Effect of *Annona squamosa* leaf aqueous extract on TGF-1, 8-OHdG and VEGF in control and experimental groups

Groups	Control (I)	Acute colitis (II)	<i>A. squamosa</i> (III)	Treatment (IV)	P
TGF-1β (pg/ml)	37.25±2.50 ^b	58.45±2.63 ^a	40.50±2.90 ^b	44.36±3.53 ^b	0.000*
8OHdG (pg/ml)	12.46±1.13 ^b	30.47±3.84 ^a	14.75±1.25 ^b	19.00±1.39 ^b	0.000*
VEGF (pg/ml)	3.75±0.48 ^b	1.33±0.05 ^c	4.50±0.33 ^b	10.47±0.66 ^a	0.002*

Data expressed as mean ± SE; a, b & c: Statistically significant from control or ulcerative colitis group, respectively at P<0.05 using one-way ANOVA followed by Tukey-Kramer as a post-hoc test. *F (P<0.05).