Biomedical & Pharmacology Journal Vol. **1**(2), 469-470 (2008)

Extracts of brassica oleracea is suppressive but not curative for trypanosomiasis

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(Received: October 03, 2008; Accepted: November 10, 2008)

ABSTRACT

Previously documented anti-trypanosomal activity of Brassica Oleracea was investigated using Methanolic and aqueous extracts on Sprague Dawley rats. The extracts prolonged the duration of live of all infected/treated compared to the infected/untreated rats, but did not provide cure because they all died earlier than the uninfected group. Histological examination of the liver showed minimal pathological changes in the treated group relative to the untreated though trapanosomes.

Key words: Portal hypertrophy, Trypanosomiasis, Enugu, Liver.

INTRODUCTION

Plant material

Methanolic and aqueous extracts of Brassica Oleracea (wild cabbage) collected during January, 2006 at Enugu, South-Eastern Nigeria and authenticated by Botany department of University Of Nigeria, Nsukka. Specimen is deposited at Department of Physiology, College of Medicine, University of Nigeria, Enugu campus.

Use in Traditional medicine

Anti-oxidant[1], anti-cancer[1, 2], antifungal[3] and anti-trypsonomal[4]

Previously isolated constituents

Various Phenols, Dithioltiones, Glucosinolates, Coumarins,, Vitamins A, B1, B2 and C

Tested material

- Aqueous extract
- Methanolic extract

Studied activity

Anti-trypanosomal

Animal used

Sprague Dawley rats acclimatized and under standard conditions were feed with pelleted food and water ad libutum. Then infected with Strains of T.Brucei isolated from cattle's in Federe, Northern Nigeria by The Nigerian Institute of trypanosomal Research, Vom, Jos.

Studied activity

Life span of animals and post-mortem histological examination of the liver.

RESULTS

Trypanosomal infected Sprague Dawley rats died after three days. Histological findings included trypanosomes in vessels and signs of congestion with portal hypertrophy.

Animals treated with methanolic and

aqueous extracts died after 5-6 days and 6-8days respectively. However, Venous dilatation and portal hypertrophy in all treated animals were minimal compared to the untreated, but majority (80%) had trypanosomes in the vessels.

All the uninfected/untreated animals were alive at termination of study.

CONCLUSIONS

Trypanosomiasis remains a deadly diseases demonstrated by death of all infected rats on 3rd in absence of treatment. Extracts of Brassica Oleracea has anti-trypanosomal activities as previously reported by Igweh et al, 2002. However our result is suggestive of suppressive effect rather than curative as previously documented. The aqueous extracts had more suppressive effects than the methanolic extracts irrespective of route of administration.

The use of Brassica Oleracea for treatment of Trypanosomiasis should be discontinued except as a suppressive adjunct.

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