

In vitro anti-amoebic potential of medium chain triglycerides compounds

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Background: Amoebiasis is a parasitic disease caused by *Entamoeba histolytica* that causes death in developing country. The gold standard treatment for amoebiasis is metronidazole. However, the emergence of resistant against metronidazole has been increasingly reported. Thus, it is important to search for other alternative control measure which is safe and effective. Medium chain triglyceride (MCT), an active compound in natural products is widely available as a nutrient supplement and has been shown to have anti-protozoal properties.

Objective: Therefore the objective of this study is to investigate the potential effect of medium chain triglycerides (MCT) against amoebic infections.

Methods: The trophozoites of *Entamoeba histolytica* HM1: IMSS strain were axenically cultivated in TYI-S-33 medium in culture flasks and incubated anaerobically by using Anaerocult A (Merck). The anti-amoebic effect was determined by measuring the minimum inhibitory concentration (MIC) of *E. histolytica* against MCT active compounds which include lauric acid, capric acid, caprylic acid and caproic acid were based on scoring of trophozoites growth using the standard method.

Results: Lauric acid and capric acid exhibited anti-amoebic effect with minimum inhibitory concentration (MIC) of 400 µg per ml and 800 µg per ml respectively.

Conclusion: In conclusion, MCTs was active against *E. histolytica in vitro* and should be considered as a probable anti-amoebic compound in amoebiasis.

Biography

Nurul Azira Binti Mohd Shah has completed her degree in Bachelor of Medicine and Bachelor of Surgery (MBBS) from University of Malaya, Malaysia. She was also awarded Master of Pathology (MPath) in Clinical Microbiology from Universiti Sains Malaysia. She is a Clinical Microbiologist and Medical Lecturer in Universiti Teknologi MARA, Malaysia.

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