



Comparative Study Between Cyclophosphamide And Dapsone

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Abstract:

It is broadly acknowledged that cancer, the second leading cause of mortality, significantly impacts global health. In recent years, chemotherapy often induces prolonged effects, which are exceedingly detrimental to the physiological and psychological well-being of patients. In this study, we examine recent methods for the extraction and quantitative analysis of such compounds in pharmaceutical and biological samples. Within this context, this review aims to elucidate the fundamental principles of chromatography and spectroscopy. Research and development in anticancer drugs represent the largest market segment in the pharmaceutical industry in terms of the number of projects, clinical trials, and expenditure. Our objectives include enhancing cancer treatment by deepening our understanding of the mechanisms by which anticancer treatments eliminate vulnerable tumor cells. This article provides an overview of current knowledge regarding anticancer drugs, including their pharmacology, mechanisms of action, uses, side effects, precautions, and contraindications. This brief review outlines the current status of anticancer drug development and suggests ways to further improve the accuracy and efficacy of cancer treatment discovery.

Comparative study between two drug act as a antimutagenic, cyclophosphamide was highly effected then Dapsone on the treatment of cancer.

Keywords- Cancer, cyclophosphamide, Dapsone

INTRODUCTION

This project work is based upon find out the antimutagenic drug having less toxicity and most potent for cancer patient because comparative drug produced harmful effect for normal cell of the body so this project is comparative study between cyclophosphamide and Dapsone.

1) Papiloma induced by DMBA+CROTON OIL

2) Anti-Papiloma activity study of St. Drug cyclophosphamide & test drug Dapsone

Material and method: -

Animals: - The study was conducted on random bred, 6-7 weeks old and 24-28gm body weight bearing, male Swiss albino mice (*mus musculus*).

Animals were maintained under control conditions of temperature and light (Light: dark, 10hrs:14hrs.). They were provided standard mice feed (procured from Hindustan levers Ltd India) and water ad libitum. The study protocol is approved by the departmental animal ethical committee.

Treatment Group		
1	GROUP A- (untreated control)	No treatment
2	GROUP B- (vehicle control)	100ul acetone 2 times/week up to 8 weeks
3	GROUP C- (DMBA alone)	104ug DMBA was dissolved in 100ul acetone and single application was given.
4	GROUP D- (Croton oil alone)	1%croton oil was applied on skin 2 times a week up to 8 weeks.
5	GROUP E- (DMBA+Depstone+Croton oil)	104ug DMBA was dissolved in 100ul acetone and single application was given afterwards 1% croton oil was applied on skin 2 times a week up to 8 weeks. with 250 mg/kg body weight tips on dapsone.
6	GROUP F- (DMBA+cyclophosphamide+croton oil)	104ug DMBA was dissolved in 100ul acetone and single application was given afterwards the 100ul dose of cyclophosphamide at the dose of 50 mg/kg body wt. Dose was given one hour before each application of 1% croton oil 2 times a week up to 8 weeks.

Result and description

S.No.	Groups	Cumulative No. of papillomas	Tumour Incidence	Tumour Yield	Tumour Burden	Average latent period
A	Vehicle Alone	0	0/6	0	0	0
B	DMBA Alone (1 application)	0	0/6	0	0	0
C	Croton oil alone	0	0/6	0	0	0
D	DMBA+ Croton Oil	25	06-jun	3.5±0.46	3.8±0.46	7.43±0.41

E	DMBA+DAPSONE (250mg/kg) +Croton oil	14	04-june	1.89±0.75	2.9±0.57	8.36±0.38
F	Cyclophosphamide+ DMBA+ Croton oil	17	5/6	1.82±0.71	2.7±0.54	8.31±0.32

Inducing of papilloma



Skin Cancer

Treated with Depsone



Summary and conclusion

The standard drug cyclophosphamide was highly effected then Dapsone on the treatment of cancer. The control group does not show the positive effect because these are not treated. The first group show lesser extent of positive result. The second group show significant result. The third group show more positive result and the fourth group shows much positive result on Anti-cancer.

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