

CHAPTER - V.

P A R T - I.

Study of Jawaharene Injection on M.F.S. Tumour of C<sub>3</sub>H Mice.

Materials and Methods :

M.F.S. tumour :- It was maintained in C<sub>3</sub>H mice as described in Chapter-II.

Stock Solution of Jawaharene :- Jawaharene was dissolved in Ethyl oleate so that the concentration was 500 mg/ml. It was filtered through sterile Seitz filter pads and kept in cold at 2-4<sup>0</sup> C in glass ampoules. Required further dilutions were made in Ethyl Oleate.

Experiment :

In-bred C<sub>2</sub>H mice weighing 15-20 gms of body weight were used for the experiment. Tumours were developed in them within 5-6 days by injecting 1 ml of 20% homogenate (200 mg) to one hind limb of each animals.

After transplantation of tumours the animals were divided in following groups.

Gr.I Control :- The tumours were allowed to grow without injection of any drug. Ten mice were selected for this group. The tumours were excised after 9 days and weighed after blotting with filter papers.

Gr. II :- Jawaharene in different doses were injected subcutaneously to the animals daily on either leg alternately after transplantation of tumour.

The injection of Jawaharene started from the day of tumour transplantation and were continued for 12 days. The tumours were then excised from the body, blotted in filter paper and weighed. 10 mice were used for each dose of Jawaharene.

Gr. III - Solvent Control :- Animals received daily 0.5 ml of Ethyl oleate in the same way as in Gr. II.

Gr. IV :- Intratumour Injection of Jawaharene :- 0.1 ml of Jawaharene solution containing various doses, was injected directly into the tumour tissue. Second injection was given 4 days after the first one. After 12 days the tumours were excised, blotted in filter paper and weighed.

Results shown in the following tables (6 and 7) with S.D.+ values indicate the average of 15 experiments.

Table - 6.

Effect of Subcutaneous Injection of Jawaharene for  
12 Days on Tumour Tissue.

Values indicate the average of 15 experiments with S.D.±.

Group	No. of Animals	Total dose per Animal	Weight in gms.	Decrease in wt. in %
Gr. I	10	No drug	2.132 ± 0.13	
Gr. IIA	10	100 mg	1.659 ± 0.29	22.1
Gr. IIB	10	200 mg	1.132 ± 0.07	46.8
Gr. IIC	10	400 mg	0.905 ± 0.18	57.5
Gr. III	10	Solvent Control (Ethyl oleate)	2.004 ± 0.27	5.9

Table - 7.

Effect of Intra Tumour Injection of Jawaharene.

Values indicate the average of 15 experiments with S.D.±.

Experiments	No. of Animals	Total dose per Animal	Wt. of tumour in gms.	Decrease in wt. in %
Gr. IV A.	10	Control without any drug	2.13 ± 0.15	Nil
B.	10	100 mg.	1.607 ± 0.12	24.5
C.	10	200 mg.	1.007 ± 0.34	52.6
D.	10	300 mg.	0.643 ± 0.16	69.8
E.	10	400 mg.	0.591 ± 0.29	72.2

Result :

From table 6, it is clear that average weight of tumours became 2.132 gms, that with only ethyl oleate was 2.004, so only 5.9% decrease in tumour weight was seen due to solvent. The progressive decrease in tumour weight with increasing doses of Jawaharene was only due to the addition of Jawaharene.

From table 7, it is evident that Jawaharene when injected directly into the tumour itself showed better effect. With same dose of Jawaharene, the percentage of inhibition of growth of tumour was more when injected directly into the tumour than when injected subcutaneously.

CHAPTER - V.

P A R T - II.

Effect of Jawaharene on Ehrlich Ascites Cells in C<sub>3</sub>H Mice.

In previous part of this chapter, effect of Jawaharene on solid tumour tissue was observed and in this part of the chapter we have seen the effect of Jawaharene on ascitic tumour.

Materials and Methods :

Ehrlich Ascites cell suspension was prepared as described in Chapter-II.

Jawaharene in Ethyl oleate (100 mg/0.5 ml) was used for the experiment.

The animals for experiment were divided in the following groups.

Group I : Control - Animals injected intraperitoneally with Ehrlich Ascites cells.

Group II - a) Animals were given Jawaharene injection subcutaneously on alternate days. The injections were started 24 hours after transplantation and were continued for 12 days (6 injections); one group receiving 100 mg of Jawaharene and second group receiving 150 mg of Jawaharene.

b) Animals were given 0.5 ml of Ethyl oleate control solution in the same way as group I Ia.

After the death of animals, the whole amount of ascitic fluid was aspirated in a centrifuge tube and the ascites cells were spinned down and the packed cell volumes were measured.

TABLE - 8

Effect of Jawaharene on Ehrlich Ascites Cells in C<sub>3</sub>H Mice.

Group No.	No. of animals	Treatment	Average packed cell volume in c.c.	Average survival
I	10	Ascites control	4.9	9 days
IIa	i) 20	Ascites infection followed by Jawaharene injection (100 mg)	3.7	12 days
	ii) 20	Ascites infection followed by Jawaharene injection (150 mg)	3.0	15 days
IIb	10	Ascites infection followed by ethyl oleate injections	4.8	9 days

Results :

From Table 8 it was seen that the packed cell volume of the ascites cells was decreased by 24.5 p.c. and 38.7 p.c. with 100 mg and 150 mg Jawaharene respectively. From the Group IIb experiment, it was evident that only ethyl oleate had practically no inhibitory effect on the packed cell volume. So the ~~decrease~~ decrease of packed cell volume in Gr. IIa was due to Jawaharene only.