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ABSTRACT

The study investigated the effect of infra red ray on the growth and development of secondary hydatid cysts of *Echinococcus granulosus* in mice which based on changes in cysts numbers, weights, diameters and percentage of their reduction, the changes in liver and spleen weights and their organ index.

The study showed significant reduction, ($p \leq 0.05$), in secondary hydatid cysts weights and diameters in cyst which developed from irradiated protoscoleces. Also, there was a reduction in liver weights and organ index, with increasing spleen weights and organ index.

The study elucidated that the best effect of infra red ray on cysts numbers, diameters, percentage of their reduction, liver weights and organ index were at 3 minutes of irradiation. Whereas, the optimum result of cysts weights was obtained at 5 minutes of radiation.

Echinococcus granulosus ()

($p \leq 0.05$)

3

5

() *Echinococcosis*

. [1] cyclozoonotic disease

Echinococcus multilocularis *Echinococcus granulosus*

Cystic Echinococcosis

. [3,2]

E. vogeli

Alveolar echinococcosis

. [5,4]

%5

%80

%11

. [6]

. [7]

[9]

[8]

. [10]

Cryptosporidium p.

. [11]

...

	20		750-700
		5 3 2 1	
12	20g		4
		5,3,2,1	

Diethyl ether

Vernier

[14] Organ index

Mettler HR-200 JAPAN

:

$$1000 \times \frac{\quad}{-} =$$

Complete Randomized Design (CRD)

Duncan's multiple rang tests

[15] P<0.05



Absorption detector

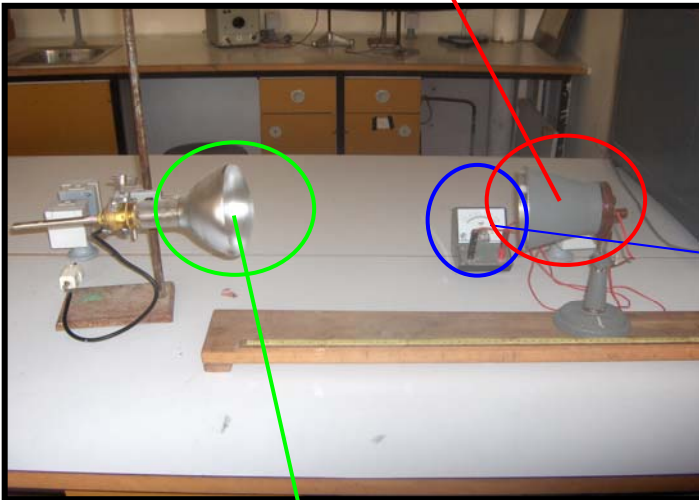
(I_0)

(I_1)

-:

(I)

$$I = I_0 - I_1$$



Absorption meter مقياس الامتصاصية



IR – Source جهاز مولد للأشعة تحت الحمراء

750 – 700

240 – 220

48.5

Vavonerzo

:(1)

...

(A -1)

3

3 . 5 3 2 1

.P≤0.05

5

1 2 3 1.82 P≤0.05

33

P≤0.05

2 5 1 0.39 3

2.097 1.186 1.183

.P≤0.05

2.80

2 5 1 %70 3

%20 50 50

(B-1)

(B-1)

P≤0.05

.P≤0.05

:(A-1)

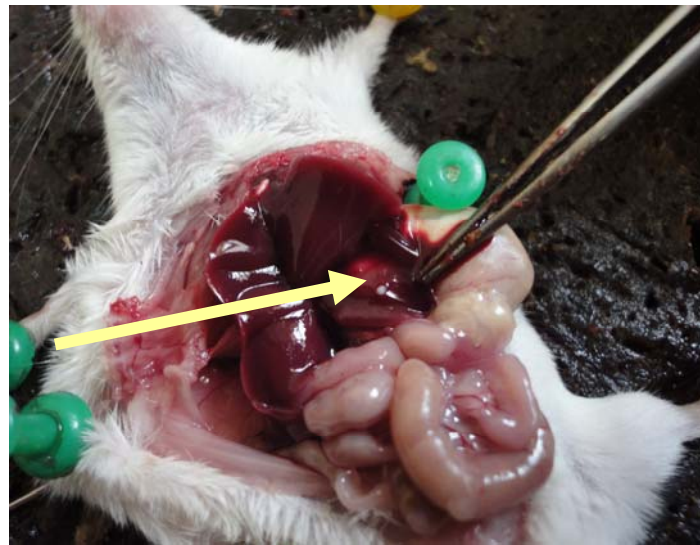
	()	()		
0	2.8000 ± 2.0000 a	33.0000 ± 2.0000 a	2.0000 ± 1.0000 a	C+
50	1.1833 ± 0.02887 bc	4.4333 ± 0.9866 b	1.0000 ± 0.0000 a	1 min +
20	2.097 ± 1.0498 ab	3.8000 ± 0.7550 bc	1.6667 ± 1.5774 a	2 min +
70	0.3900 ± 0.5283 c	1.8667 ± 0.01323 cd	0.6667 ± 0.5774 a	3 min +
50	1.1867 ± 0.1206 bc	1.8200 ± 0.6110 d	1.3333 ± 1.1000 a	5 min +

(ANOVA)

:(B-1)

Mean Square				
2.604	565.970	1.100*	4	
0.1155	1.1547	0.5774	10	

$p \leq 0.05$



:(1)



:(2)



3

:(3)



5

:(4)



3

:(5)

(A-2)

3

3

1.054 5 1.026

$P \leq 0.05$ 1.6

% 44.4 3

69.56

$.P \leq 0.05$

5 3 1 2

$.P \leq 0.05$

5 3 1 4.5 2

3.0

$.P \leq 0.05$

...

:(A-2)

	()		()	
3.0000b± 0.0360	0.0737b ± 0.0115	69.5667a± 9.0002	1.6000a ± 0.2000	C +
4.4267a± 1.1853	0.1083a± 0.0240	65.4600ab± 7.8722	1.5167ab ± 0.1443	1 min +
4.5067a± 0.9833	0.1097a± 0.0226	57.8333b± 5.0560	1.3200b ± 0.1153	2 min +
3.9267ab± 0.2610	0.095ab ± 0.0500	44.4333c± 1.7559	1.0267c ± 1.528	3 min +
3.59ab ± 0.506	0.0870ab ± 0.0624	45.2333c± 2.6690	1.0543c ± 3.48	5 min +

(B-2)

.P≤0.05

.P≤0.05

(ANOVA)

:(B-2)

Mean Square					
1.161*	0.001*	394.004	0.204	4	
0.506	0.0002	5.1963	0.1155	10	

p ≤ 0.05

*

3 0.666
3 %70

[19,18,17,13] *Cryptosporidium parvum*

[11] Al-Mahmmod, 2006

Cryptosporidium parvum

Cryptosporidium parvum

750-700

5

48.5

20 15 10

Cryptosporidium parvum

[11]

60)

10 8 6 5 4 3 2 1

°(40 50 55

%40

15 12

%100

. 15 ° 45

. [20] ° 60-50

[21] Wang *et al.*,2005

[7] Pohlea *et al.*,2010

metacestode

Pohlea

Echinococcus multilocularis

(1

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