

(2006/6/13 , 2006/3/9)

10

cyclic AMP

17	/	50	cyclic AMP		
	/	16	/	32	/
	/	59	/	62	
			/	42	/ 44
	/ /	11.231	/ /	32.234	
	/ /	21.231	/ /	22.245	

Activity of Adenylate Cyclase in Embryonic Cell

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ABSTRACT

A total of 10 normal cases for each pregnancy month, from the fifth month, were randomly selected, in Mosul Albatool hospital. Also 3 cases of abnormal embryos were chosen for each month, from the seventh month of pregnancy. Amniotic fluids was collected, by trans-vaginal method amniocentesis. The embryonic cells were separated and extracted; the resulted pellets were used for adenylate cyclase determination. While cyclic AMP measured in both cell filtrate and the amniotic fluids. The result yield that cyclic AMP decreases, from 50 $\mu\text{g/l}$. to 17 $\mu\text{g/l}$. in amniotic fluid, and from 32 $\mu\text{g/l}$. to 16 $\mu\text{g/l}$. in embryonic cell through the last three month of pregnancy. Also the results showed an increase in cyclic AMP, in abnormal pregnancy comparing with the normal cases while a decreases through pregnancy advancing in the last three month in both amniotic fluid and embryonic cell from 62 $\mu\text{g/l}$ to 59 $\mu\text{g/l}$ and from 44 $\mu\text{g/l}$ to 42 $\mu\text{g/l}$ respectively. While the activity of adenylate cyclase decrease in relative to the cyclic AMP level, yielding 32.234 $\mu\text{mol/min/mg}$ enzyme to 11,231 $\mu\text{mol/min/mg}$ enzyme, in normal embryonic cell and from 22.245 $\mu\text{mol/min/mg}$ to 21.231 $\mu\text{mol/min/mg}$ enzyme in abnormal embryonic cell. While protein did not change significantly in embryonic cell in both normal and abnormal cases.

(3':5'-cyclic AMP)

, (Murad et al., 1969)

(ATP)

(Khandelwal and Hamilton,

(Hirata and Hayaishi, 1967) ,

1971)

.(Sutherland et al., 1962)

.(Rodbell et al., 1981)

GTP

; Newton and Salih, 1986)

(cyclic AMP)

.(Newton and Smith, 2004

(Robison et al., 1971)

.(Ali, 1994)

(Rodbell, 1981)

,GTP

(Rodbell, 1981)

GPPNHP

GTP

GT-pase

.(Rodbell, 1981)

. (Newton et al., 1984)

cyclic AMP

cyclic AMP

.(Sutherland et al., 1962)

....

proliferation

cyclic

Trimester

AMP

15 -10

()

%1

%10

% 0.9

(Waring et al., 1994)

25 MSE

8000 Xg (4)

10000 Xg (4)

50 HCL

9

1

(4)

pH 7.4

6.6

2

pH 7

KOH

(4)

10

14000 Xg

20

(40)

7.2

50

(5)

(Newton and Salih, 1986) pH

(Shimadzu UV-

(Ali 1994)

210-450

visible recording spectrophotometer UV-160)

(5)

cyclic AMP

pH (2)

cyclic AMP

AMP

cyclic AMP

.9400

cyclic AMP

cyclic

cyclic AMP

AMP

(Ali,

ATP

10

1994)

0.1

pH 7.4

(2)

(3)

(32)

4

0.05

Dowex 1x 8

0.2

3

cyclic AMP

pH 7.0

(Lowry et al., 1951)

(Muler, 1973)

cyclic AMP

(1)

/ 50

/ 30

/ 45

/ 17

(Nogueira et al., 2003)

(Yamamoto et al., 2002)

cyclic AMP

(1)

cyclic

AMP

(2)

() cyclic AMP : 1
 (10)

cyclic AMP		cyclic AMP		
-/+	/	-/+	/	
0.322	32	0.234	50	
0.343	19	0.889	30	
0.456	28	0.321	45	
0.678	18	0.324	37	
0.981	16	0.987	17	

() cyclic AMP : 2
 (3)

cyclic AMP		cyclic AMP		
-/+	/	-/+	/	
0.187	44	0.445	62	
0.111	48	0.345	56	
20.13	42	0.289	59	

(3)

cyclic AMP

()

(1)

10 () :3
/ /

/ /	10/	
32.234	18.651	
18.456	19.345	
25.221	21.241	
17.321	20.003	
11.231	22.231	
22.245	22.546	
20.278	20.545	
21.231	21.346	

cyclic AMP (Yukimasa, 1999)

cyclic AMP

cyclic AMP (Budillion, 1999)

.cyclic AMP

GTP

(Wooton-Kee and Clark, 2000)

. (Koh, 2000)

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