

The effect of epinephrine on hair loss in male adult Rat

Jafar Ai (PhD) *¹, Asadollah Zarifkar (PhD)², Maryam Rasti (MSc)³

¹Associate Professor, Department of Anatomy, Fassa University of Medical Sciences, Fassa, Iran.

²Associate Professor, Department of Physiology, Shiraz University of Medical Sciences, Shiraz, Iran.

³Department of Physiology, Shiraz University of Medical Sciences, Shiraz, Iran.

Abstract

Background & Objective: In addition to genetic and hormonal effect, various environmental influence on hair growth. For instance, stress can release epinephrine in the blood circulation, and epinephrine can effect on various tissues, especially on skin and hair tissue. Many investigators try to find effective drugs for the hair growth. Because most of these drugs are vasodilator agents, we design present study to determine the local effects of epinephrine administration as a vasoconstrictor agent on growth of hair.

Materials & Methods: In this experimental study, 45 Wistar male Rats were divided in three groups, which taking 1.5ml/kg epinephrine, 1ml/kg epinephrine two times/daily for two months and control group which reciving normal salin with same valume for two months respectively. Following observing the macroscopically findings and segregation of the skin, the slide were prepared and the number of hair follicles were examined.

Results: The epinephrine causes degeneration of hair folicule, sebasus gland, and decreasing number of hair folicule in comping with control group ($P<0.05$).

Conclusion: This study showed that the subcutaneous adminstration of epinephrine cause the hair lesions, and this significantly is related directly with the dosage of epinephrine.

Keywords: Epinephrine, Hair, Rat

* Corresponding Author: Jafar Ai (PhD), E-mail : jafar_ay 2000@yahoo.com

Received 30 Jun 2007

Revised 13 Jan 2008

Accepted 25 Feb 2008