

Original Paper

Effect of alcoholic extract of *Portulaca Oleracea* on serum level of thyroid hormones in hypercholesterolemic Rats

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Abstract

Background and Objective: Thyroid hormones have a key role in regulation of metabolism and function of the tissues. This study was carried out to evaluate the effect of alcoholic extract of *Portulaca Oleracea* on serum level of thyroid hormones in hypercholesterolemic rats.

Methods: In this experimental study, 60 adult male Wistar rats were randomly allocated into six groups including: control group with normal diet, fat diet group with high fat diet and interventional groups were received high fat diet and alcoholic extract of *Portulaca Oleracea* with maximum dose (800 mg/kg/bw), moderate dose (400 mg/kg/bw), minimum dose (200 mg/kg/bw) intraperitoneally for 21 days and finally, animals in atorvastatin group were received high fat diet with atorvastatin (10 mg/kg/bw, intraperitoneally) for 21 days. After the end of this period, T₃, T₄, TSH and total cholesterol measured for each animal.

Results: Serum level of T₃ and T₄ in the experimental groups which were received *Portulaca Oleracea* extract and atorvastatin group significantly increased in compared to controls (P<0.05). Serum level of TSH level significantly reduced in the experimental groups which were received *Portulaca Oleracea* extract and atorvastatin group in compared to controls (P<0.05). The serum total cholesterol level significantly reduced in the experimental groups which were received *Portulaca Oleracea* extract and atorvastatin group in compared to fat diet group (P<0.05).

Conclusion: *Portulaca Oleracea* extract with increasing of secretion of thyroid hormone reduced the total cholesterol and TSH animals with hypercholesterolemia.

Keywords: Hypercholesterolemia, *Portulaca Oleracea*, Atorvastatin, T₃, T₄, TSH, Cholesterol

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