Review of Strategies for Attenuation of Allodynia after Spinal Cord and Peripheral Nerve Injuries

Last Name and Name: Pourheydar - Bagher
Email:bpourheydar@yahoo.com
Other Authors: Bagher Pourheydar,Mehrdad Bakhtiari,Norooz Najafzadeh,Maryam Pourheydar,Sara Soleimani

Abstract::
Abstract: Objective: Injury to spinal cord and peripheral nerves lead to development of chronic pain conditions such as Allodynia. Allodynia is an abnormal pain syndrome in which innocuous stimuli gain the ability to
produce pain. Epidemiological studies have reported that more than 64% of patients with spinal cord injuries suffer from chronic pain syndromes. Allodynia has various physical and psychological effects on patients which compromise their quality of life and they have a poor ability to work. Several studies have investigated the strategies for attenuation of Allodynia. The aim of this study is to review of strategies which have applied to attenuate the Allodynia after SCI. Material & Methods: Review of strategies for attenuation of Allodynia
(1995-2009) summarizes the experiences in treatment of Allodynia. We describe the main results of the studies. Results: The effective methods for reduction of Allodynia which have reported including: Intraspinaly transplantation of GABAergic cells, transfection of stem cells with GDNF (glial cell derived neurotrophin) prior to transplantation in injured rat spinal cord, Intrathecal injection of Minocycline an inhibitor of microglial cell activation, administration of GABA receptor agonists, grafting the cells which secretes seroto,catheculamins and opioids like chromaffin cells of adrenal medulla, administration of cyclooxygenase-2 (cox-2) inhibitor Meloxicam, intrathecal administration of Adenosine, or Lidocaine or Gabapentin, intrathecal administration of ?-opioid receptor agonists or NMDA receptor antagonists. Conclusion: Results of these studies have shown that the more effective strategy for attenuation of Allodynia is
applying the methods which increase the inhibitory tone of spinal cord which have lost after injury such as transplantation of GABAergic cells and administration of GABA receptor agonists or NMDA receptor antagonists

Key words: spinal cord injury, Allodynia, treatment