

EFFECT OF MELATONIN ON ALVEOLAR TYPE-2 CELLS IN DIABETIC ALBINO RATS

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Abstract

Melatonin is a hormone secreted by pineal organ of the body besides pineal organ there are other extrapineal organs from where melatonin secretion takes place. Lung is a main respiratory organ which contain large numbers of alveoli are always filed with air .Alveolar type 2 cells secrete surfactant protein.Besides many function of surfactant protein it also provide immunity as well as help in proper ventilation processes.Diabetes is a metabolic processes which causes deleterious effect on multiple organ.In our experiment it was find out alveolar type -2 cells of lung which shows deleterious effect by diabetes get repaired by melatonin hormone.Melatonin hormone not only protect various organ but also help in providing

Introduction

Lung is a main respiratory organ which play important role in gaseous exchange it contains large numbers of alveoli surrounds by pneumocytes cells.Alveolar type 2 cells secrete surfactant protein and helps in providing immunity to lung.Diabetes is a metabolic disorder which causes deleterios effect on various organ. Melatonin is a night hormone of which secretion depend upon stimulation of light.It is also known as immunostimulator which assist in providing immunity to lung.

Materials and methods

Albino rats were kept in acclimatization for seven days. Rats were further divided in four groups control,diabetes,melatonin and diabetes+melatonin treated group.After treating the group with stz,and melatonin injection lungs were excised out lungs of treated groups were further processed with Histology, IHC rt PCR,Western blotting,Elisa etc.

Results and conclusion

Histopathological analysis and expression of surfactant protein by various experimental techniques reveals that pathogenecity caused by diabetes on alveolar type 2 cells get repaired in stz + melatonin treated group.Thus it can be concluded that melatonin helps in repair as well as in providing immunity to lung in diabetic condition.

References

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