AMELIORATING EFFECT OF HABBATUS SAUDA ON ANDROGEN RECEPTOR OF NICOTINE TREATED RATS SEMINAL VESICLE

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Abstract

Habbatus sauda, a promising medicinal that has been used since antiquity in aromatic, pastry and traditional medicine by various culture and civilizations around the world. The various health benefits in Habbatus sauda may be due to the presence of its pharmacology properties. It is well documented that nicotine adversely affect health by causing detrimental effects in variety of organ tissues. Androgen is a steroid hormone which is important for normal development, maintenance and function of male reproductive organs. Androgen receptor (AR) was found in the glandular epithelial cells of the seminal vesicle. Current study was carried out to view the presence of androgen receptor in the seminal vesicle of treated Sprague Dawley rats. The rats were divided into five groups and each group was treated for 100 days with either saline (S), nicotine (N), corn oil (CO), Habbatus sauda (HS) or nicotine-Habbatus sauda (NHS). The S group was intramuscularly (i.m.) injected with 1.0ml/100g of saline, while the N group was intramuscularly (i.m.) injected with 5.0mg/100g of nicotine. The CO group was force-fed with 0.1ml/100g of corn oil while the HS group was force-fed with 6μl/100g of Habbatus sauda oil. The NHS group was treated with same dose and method as given to the N and HS groups. Their seminal vesicle was fixed in formalin solution for tissue processing prior to staining with AR mouse monoclonal primary antibody. The S, CO, HS and NHS groups showed high intensity of AR staining in the epithelial cells which indicated presence of the androgen receptor. However, the intensity of the staining was weaker in the N group. This study suggests that nicotine caused damage to the seminal vesicle cells via disrupting their androgen receptor. Supplementation with Habbatus sauda however helps to prevent the detrimental effect caused by the nicotine.

Keywords: Habbatus sauda, nicotine, seminal vesicle, androgen receptor

Introduction

Habbatus sauda, a promising medicinal that has been used since antiquity in aromatic, pastry and traditional medicine by various culture and civilizations around the world. The various