

Medicinal Plants with Antidiabetic Effects – An Overview (Part 1)

Ali Esmail Al-Snafi¹, Wajdy J Majid², Tayseer Ali Talab¹

¹Dept. of Pharmacology, Thi qar College of Medicine. ²Dept. Biochemistry, Thi qar college of Medicine, Iraq.
Corresponding Author: Ali Esmail Al-Snafi. Department of Pharmacology, College of Medicine, Thi qar
University, Iraq.

Corresponding Author: Ali Esmail Al-Snafi

Abstract: Diabetes mellitus is one of the most common endocrine metabolic disorders. It caused significant mortality due to its complications. Insulin and oral antidiabetic drugs associated with a number of serious adverse effects. The search for more effective and safer hypoglycemic agents is one of the important areas of investigation. Medicinal plants possessed hypoglycemic effects by many mechanisms. The current review discussed the medicinal plants with antidiabetic effect with special focus on their mechanism of action.

Keywords: Diabetes, Insulin, Phytoconstituents, Pancrease, Blood glucose, Beta cell, Antidiabetic, Hypoglycaemic, Medicinal plant.

Date of Submission: 25-03-2019

Date of acceptance: 09-04-2019

I. INTRODUCTION

Diabetes mellitus is the most common endocrine disorder. It affected around 2.8% of the world's population and is anticipated to cross 5.4% by the year 2025. Medicinal plants were used for the treatment of diabetic mellitus in traditional medicine systems of many cultures throughout the world. The hypoglycemic activity of many medicinal plant products were evaluated and confirmed in animal models as well as in human beings. In some cases, the bioactive principles of the medical plants have been isolated and identified and the mechanism of antidiabetic effects was clarified. There are several possible mechanisms by which the medicinal plants induced hypoglycemia. These included: enhancing regeneration or revitalization of damaged pancreatic beta cells, and protecting against further damage, enhancing insulin synthesis and secretion from the beta-cells, decreasing glucose absorption from gastro-intestinal system, increasing insulin sensitivity of the tissues, possessing of insulin mimicking effects, and changing the activity of some enzymes involved in glucose metabolism[1]. This review discuss blood glucose-lowering effects of medicinal plants.

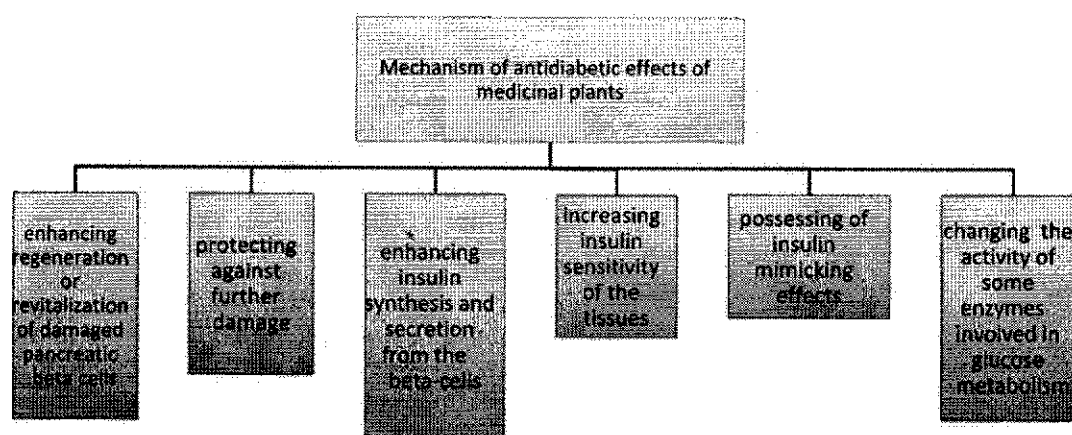


Fig 1: The mechanism of antidiabetic effects of medicinal plants