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Educational Qualification: M. Pharmacy (Pharmaceutical Technology)

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Research Abstract

Diabetes mellitus (DM) is a condition in which inability of the body to respond or produce insulin results in anomalous metabolism of simple carbohydrates resulting in upsurge of blood glucose. Most frequent and devastating complication of diabetes is the diabetic wound that may end up in amputation. Approximately 25% of patients with DM have chance to develop a diabetic wound in their life time. The impaired healing of diabetic wound is attributed to triopathy of diabetes i.e. immunopathy, vasculopathy and neuropathy. If left untreated, these wounds may result in development of gangrene subsequently leading to amputation. Increased levels of inflammatory as well pro inflammatory cytokines in diabetic wounds causes a chronic inflammatory condition which leads to decreased levels of growth factors. Improper matrix formation is due to the rapid degradation of formed matrix because of increased levels of matrix metalloproteinases (MMPs). Statins are antihyperlipidemics which are involved in the melvonate pathway and exhibit higher antithrombotic effect. This process involves targeting of many growth factors and inhibiting the pathway from causing inflammation. The platelet aggregation is interfered and promotes stabilization of arthrosclerosis plague in diabetic wounds. The Statins can play a crucial role in the altered angiogenesis in chronic wounds. Controlled release of the Statins through a nano bioengineered materials can increase the rate of granulation tissue formation and repithelization of the detoriated tissues in diabetic wounds.

Fellowships: Govt/Non-Govt: Nil

Awards & Scholarships: Nil

Way Forward:

A post-doctoral position which supports my research work.