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Review Article

DIABETES FOOT ULCER¹Tanuja M. Langote, ²Sakshi S Mahalle, ³Sarvesh T Lawange, ⁴Vinayak A.Katekar,
⁵Dr.Swati P .Deshmukh¹Department of Pharmacy, Shraddha Institute of Pharmacy, Washim, Maharashtra, India.²Department of Pharmacy, Shraddha Institute of Pharmacy, Washim, Maharashtra, India.³Department of Pharmacy, Shraddha Institute of Pharmacy, Washim, Maharashtra, India.⁴Department of Quality Assurance, Shraddha Institute of Pharmacy, Washim, Maharashtra, India⁵Department of Pharmacology, Shraddha Institute of Pharmacy, Washim, Maharashtra, India.**Abstract:**

Diabetes mellitus is disorder of abnormal high blood glucose levels i.e. hyperglycemia Acc⁺⁺ who in 2016, 422 million adults suffered from diabetes mellitus, types "insulin depended diabetes mellitus" or "Juvenile diabetes mellitus" {NIDDM} or "adult onset diabetes" and gestational diabetes it occurs during pregnancy. Effective management of diabetes mellitus can decreased the severity of disease by preventing amputations and mortality. blood sugar control, wound debridement and advanced dressings is part of management the main symptoms of diabetes foot ulcer is hyperglycemia, increased fluid intake, blurred vision, change in energy metabolism, increased urine production and hyperglycemia. The uncontrolled diabetes mellitus caused diabetes

Keywords:- NIDDM, Gestational diabetes, Hyperglycemia, Necrotic Tissue, Retinopathy, Macrophages, Cytokine Effect.

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INTRODUCTION:

According to WHO in 2016 442 million adults suffered from diabetes Mellitus. This is generally seen on foot & a major complication of the disease is loss of lower limbs. The other complication is during the early stage of the disease peripheral vascular disease occurs or is seen in majority & tissue loss in advanced stage diabetic foot.

Ulcer has other symptoms like hyperkeratosis, dry skin, lack of sensitivity, peripheral neuropathy, motor neuropathy, etc. Many people go for amputation which is a very painful therapy. The diabetic ulcer also causes diabetes Mellitus & leads to DFU.

Diabetic foot ulcer etiology: -

The radiology of diabetic foot ulcers are improper foot care, foot deformities, poor glycemic control, poor quality of shoes, poor hygiene.

1. Increase blood sugar level:-

Increase glycemia or sugar level in blood stiffens the arteries resulting in decreased blood & oxygen to the body.

2. Inflammation: -

It occurs due to injury to tissue due to neuropathic, macrophage & mast cells causing inflammation. The cytokine effect the inflammatory response. Pro-inflammatory cytokines are produced by activating macrophages and involved in regulating inflammation reaction.

3. Peripheral Neuropathy / Nerve damage:-

It occurs when nerves located outside of brain & spinal cord are damaged. It occurs due to diabetes, pain and reduced supply of oxygen and nutrients to the body.

4. Infection: -

It is increased due to exposure to environment and it may require amputation.

Sign & symptoms

Common signs & symptoms of diabetic wound are chronic pain.

*Signs of inflammation- swelling, redness, heat, pain & loss of functions.

*Signs of infection - pus, drainage, bad odor, dead tissue, redness, pus.

- "Drainage or blood in shoes or socks.

-large callus or cracked heels

-Large term high blood, sugar can cause a type of never dagger

-Diabetes can also affect blood flow to leg and feet.

-This condition causes arteries to become narrow or block.

-Darkened skin on the affected area.

-Diminished ability to sense hot or cold.

-Loss of hair in the area.

-Numbness.

Treatment and cure of diseases.

Glycemic control:- Increasing evidence has shown that intensive glycemic control delays the onset and slows the progression of diabetic retinopathy, nephropathy and neuropathy in patients with insulin-dependent diabetes mellitus.

Pharmacological therapy: -

Individualized patient education, improved diabetes knowledge and self-management activities have improved medication adherence to oral diabetic medications in Case Controlled trial.

Improving Vascularization: -

Revascularization of occlusively ischemic legs results in increased perfusion.

Offloading

Further pressure reducing and redistribution of weight bearing load over an increased area of the foot can be achieved.

Offloading strategies**Wound dressing: -**

It is an external protection and barrier to external force and contaminants while promoting absorption of exudate around the wound site. There were a variety of dressings available along with increasingly advanced methods of promoting wound healing.

Maggot therapy :-

Use of maggot therapy primarily functions by removing dead necrotic tissue leaving healthy granulation tissue on the wound bed.

Negative pressure wound therapy: -

Target negative pressure wound therapy is another increasingly common method used in the management of diabetic foot ulcer.

Prevention of infection.

- Taking the pressure off the area. Called offloading
- Removing dead skin and tissue. Called "debridement"
- Managing blood glucose and other health problems.

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